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NATIONAL COMMISSION ON NEW TECHNOLOGICAL  
USES OF COPYRIGHTED WORK  
(CONTU)

Twentieth Meeting

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10:00 a.m.

Arlene Langlois,  
Hearing Reporter

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CHAIRMAN FULD: I call to order the twentieth  
meeting of the Commission. I welcome you all.

The agenda calls for a report of the activities  
of the Photocopy Subcommittee. The Subcommittee  
still has certain matters in consideration; accord-

ingly that item will go over until tomorrow morning.

We have two witnesses before us today. The first is Mr. Theodore H. Nelson. He holds degrees in philosophy and sociology from Swarthmore and Harvard, respectively.

He has been active in the computer field since 1960. He has worked as a consultant and he has published a number of articles on computers as well as written two books, "Computer Lib," and the recently published, "The Home Computer Revolution." Mr. Nelson will speak to us on new applications for data-based technology.

We welcome you, Mr. Nelson.

MR. NELSON: The timing is interesting, because there is an article in the present issue of Time magazine headed, "The Computer Society," which in some respects is excellent but has less than two paragraphs on software. So that in terms of awareness of what software is going to be doing and where we are going, Time appears to be swept along with all the hardware types, telling us how wonderful it is going to be as soon as we do this, that, or the other thing.

It is a very pretty spread. There is a cartoon of the home of tomorrow in which everyone is doing something or other with a computer, and we assume

again that somehow the hardware people are going to put this together for us.

CHAIRMAN FULD: By the way, what is the issue?

MR. NELSON: This is just on the stands, February 20th.

This is not the case. The hardware people are running blind, and what is needed is thought, intelligence and a little sense of the traditions of the culture of the Western World.

I am a writer, a businessman and an artist. Some would dispute the businessman and artist, and my personal background is originally in writing.

I came into computers because I wanted a writing system. I met the computer in 1960 and said, "Wow, this is the way to get that novel organized," because writing is a complex and difficult matter.

Since that time, I have been working on exactly this design with many subsequent ramifications and I am still hoping to have the machine six months from now. Only a few of my ideas have really come out, but those who know my work seem to feel that it is fairly original and creative, so I want to talk first about what originality and creativity means in this area.

The divine spark, the inspiration that the

1  
2 creative artist or writer tries to hold himself open to  
3 and tries to go with when it comes is very much the  
4 same in the programming field. Now, when I say  
5 programming, I am not talking about general programming.  
6 My special concern is with graphics, texts, and inter-  
7 active systems, especially games which I believe are  
8 going to be the subjects for most programs of the  
9 future, as computers come into the home, as data  
10 replaces paper, and as the screen becomes the principal  
11 place at which we write, draw pictures, play and make  
12 sketches for the benefit of others.

13         There are a number of analogies I want to  
14 draw. Originally, I wanted to be a movie director,  
15 and the design of interactive computer systems is exactly  
16 the same sort of creativity - -

17         imagining a happening, imagining its emotional  
18 impact, imagining its conceptual meaning to a user.  
19 Here's a guy going to sit at a computer screen. How is  
20 he going to feel when he hits the button and something  
21 jumps out at him? That is the question of impact.

22         Now, the computer has widely been mistaken  
23 for some kind of a technical gimcrack. I hold that each  
24 person who programs a computer makes it something of  
25 himself, that the computer is actually a projective

1  
2 system, and that each program represents its creator,  
3 represents a uniquely conceived and formulated, uniquely  
4 rarified totality invariably proceeding from the  
5 unique psychology of the programmer.

6 Everything a person does in it is based on  
7 his own personal psychology.

8 How different that is from the prevailing  
9 public impression that the computer is coldly insensi-  
10 tive, impersonal, demanding.

11 Let me explain to you the reason why this  
12 style of computer usage has become a trait. It's  
13 because it seems that people who are coldly insensitive,  
14 impersonal and demanding are the ones programming it,  
15 and so the computer has come to embody this personality.

16 It is just the way that dogs and children  
17 come to act in each culture the way dogs and children  
18 are expected to act in each culture.

19 Is is my personal feeling that computers, as  
20 the world has come to know them, derive their personal-  
21 ity in no small measure from the company that is most  
22 identified with them and indeed from that company's  
23 sounding figurehead, Thomas J. Watson. If we think of  
24 computers as cold, demanding and impacable, it is  
25 because Thomas J. Watson was cold, demanding and

1  
2       impacable in his style of management. He forged his  
3       creation and that is the style which has come to be  
4       what people think computers are. If upper management  
5       is cold, demanding and implacable, so it passes down  
6       into the programmers and this seems to be so much the  
7       trait in all of them that no one bats an eye when the  
8       computer is set up to be cold, demanding and implacable.  
9       No, it seems to them the very nature of the machine  
10      itself.

11               Just as Melville saw each sailor pick on the  
12      one of lower status until the lowest man kicked the  
13      dog, so it seems like just what is to be expected.

14               Now we see the new creative libertarian style  
15      of computer programming, and this represents to me a  
16      breaking away from the implacability and impression of  
17      this century. It is possible to bring the joys of  
18      poetry and history and art and science and unfettered  
19      learning and unhampered creativity to millions of  
20      people who have endured unimaginable schooling and who  
21      lead bitter or monotonous lives. To do such simply  
22      means a complete turnabout in the way these wonderful  
23      machines are used.

24               We must turn away from the style that has  
25      been the tradition.

CHAIRMAN FULD: May I interrupt you? As to what you say, it is very interesting, but does it have any bearing on copyrightability?

MR. NELSON: Oh, I think so.

Rather than to say, "You must learn this; you can't do this; you can't do that," we must prepare systems for users who are confused and who might even be a little afraid of us.

It is overdue to --

CHAIRMAN FULD: You are going too fast again.

MR. NELSON: I'm sorry. Maybe I am just trying to get to the heart of it as quickly as I can.

We have got to make systems easy to use and clear and fun. The style of operation with which computers have been associated so long was not because it was in their nature but because it was in their tradition.

It is time for computers to enter into the intelligent and spiritual life of man. I recognize and acknowledge my duties here, because I keep saying these things, because I claim this is impossible and that things have been wrong, and I acknowledge my obligations to prove it. Proving it means to help design systems that are helpmeets to creativity, to a



man's uniqueness.

I have been working to develop such systems, first for personal use and later with the intent of helping mankind. Since I was 23, a period now of some 17 years, let me tell you what this design process has been like.

It is something like movie making and something like writing and something like illustrating magazines and something like designing furniture. First you think about your topic. Let's say it is writing. Suppose you want to design a system for use by the writer, so you think about the things that writers do.

If you don't know much about writing, you might come up with a system something rather like a present-day word processing system. First draft, cut and paste, polish, retype; second draft, cut and paste, polish, retype, for however many intermediate drafts. Then final draft, cut and paste, polish, retype. That is the shallow version, but the first thing you do to computerize this shallow version is think about this process and what parts are in what sequence. If you are going to move it into a computer, the first thing you eliminate is retype. Then you think, "How do I want it to appear on the screen? What visualizations do I want?"

What controls do I want?"

Then you think, "How do I want to move among these visualizations and these controls?" Actually, you think about all these things together. There is no one right answer. A good system will let you do everything you want easily. You will learn it simply and find your way in it easily.

Using a computer should always be easier than not using a computer. Its visualizations will correspond to what you want to think about; its controls will correspond to acts you want to perform. There would be no extraneous features.

I worked just as hard to design these interactive screen systems and I have worked while writing or editing movies in the same way. In editing movies, you are considering many complexities, the conceptual and emotional effects. They are visual to the user like a painting or a movie. They are textual to a user like a book. They involve the design of structured activities by human beings as do games or stage plays.

Paintings, movies, books, games, stage plays. All of these are copyrightable. I have tried my hand at all of these, occasionally with some success, and I know what is involved in each creative process. I can see no

1  
2 basis for withholding copyright privilege from a former  
3 creativity which embodies the same creative thrust and  
4 power as all the others, the same tentative defining  
5 of limits and patterns, the same continual reflecting  
6 and crossing out and starting over, the same groping  
7 for particulars which will be successfully embodied in  
8 some grand version you had when you started, the same  
9 selection, construction, rearrangement, dismissal,  
10 reconstruction, the same feeling when you accomplish  
11 what you wanted to accomplish in a way you didn't quite  
12 expect.

13 I can only speak for myself. It is true that  
14 too often computer programming is a job for time  
15 servers, foot soldiers, moles and drones, and not  
16 creative at all. To confuse this type of programming  
17 with freehand creative design is like confusing the  
18 people who write classified advertising with the people  
19 who write for love of words and concern for what is to  
20 be said.

21 In much computer programming, there is no  
22 creative experience, no impact, no notion of truth or  
23 interaction. In much of the other writing of mankind  
24 the same is also true, but that hardly invalidates the  
25 copyrightability for writing an original, perceptive

1  
2 program.

3           It is my personal belief that there is no  
4 distinction between this type of computer programming  
5 and the other creative arts. We cannot distinguish  
6 between computer programming and the other creative  
7 arts on the basis of the thought processes involved,  
8 the interactions, the complex trials and the selections,  
9 nor of the character of the result which may be graphical,  
10 textual or game-like, nor of the impact of the result  
11 on the final user which may be artistic, emotional or  
12 conceptual. It is interesting that the distinction  
13 can be made only by a case of special rejection, only  
14 if we single out the computer as the only device which  
15 follows a plan itself. Other plans for mechanisms may  
16 be copyrightable, but the computer which goes along by  
17 itself -- perhaps this is a distinction.

18           As a devoted practitioner of this form of  
19 creativity, I find the idea of having it prejudicially  
20 exempted from the equal protection of the law as demean-  
21 ing it in the eyes of others and strikes at my hope,  
22 any hope of special reward for special creativity.

23           There are those who seem to think that because  
24 of their training or whatever the territory is theirs  
25 by right. On the other hand, there are those who

1  
2 consider the computer as some trashy and trivial form  
3 of technical intrusion which will be dealt with when  
4 necessary, but should otherwise be ignored.

5           There are many of us who now see that the  
6 future of mankind lies not on paper, but on screens.  
7 We are trying to create for the benefit of tomorrow,  
8 the future of learning. To suggest that a creative  
9 writing deserves less respect because it is done in  
10 unchartered territory is quite a kick in the shins.  
11 To force us to work without copyrights would force us  
12 to not be able to publish openly. We would have to make  
13 the program hidden from prying eyes, and this involves  
14 a great deal of effort. It would involve an increase  
15 in the cost to the consumer. It might indeed make  
16 programs unavailable to the consumer that they ought to  
17 have because, of course, the real computer market is in  
18 the home and always has been. That is about to start.

19           No copyright would mean that much, perhaps  
20 most programming efforts would go into hiding, the  
21 obscuring of what might almost be trade secrets.

22           I see one critical question that you might  
23 consider. How great is the difference between the best  
24 programs and the mediocre ones? Is it 10% or 10,000?  
25 Are there any great programs?

1  
2 I believe so. To anyone experienced in the  
3 field there can hardly be a question. A language like  
4 APL, a program like Sketch Pad, the first truly  
5 interactive graphics that allows you to draw on a  
6 screen -- these are works of art that I think no one  
7 who fully appreciates them can deny.

8 That concludes the first part of what I  
9 wanted to say.

10 What I have been working on all this time,  
11 the principal effort has been a literary system, which I  
12 hope will bring you anything you want to read in a  
13 few seconds anywhere in the world.

14 It seems to me obvious that such a system  
15 should be built and I read all of these senseless  
16 pronouncements in the public press about how in the  
17 year X we will have a sugar cube which will contain the  
18 Encyclopedia Britannica. But what if you want to read  
19 something out of Encyclopedia Britannica? There is  
20 always something else that you haven't got locally.  
21 Serious attention has not been generally given in most  
22 locations to the problem of finding whatever you want in  
23 a hurry.

24 The approach I have taken is that using  
25 conventional equipment and later better and better

1  
2 equipment, we can indeed bring forth to a user a  
3 terminal in an arbitrary location at a time of his own  
4 usage, whatever he wants to read within seconds. Why  
5 has nobody worked on this that I know of in the major  
6 corporations? Well, because they are immured in a  
7 tradition of strange ways of using computers, because  
8 they are not really concerned with vast literary  
9 corpuses. They couldn't really see why anyone would  
10 want to read all that.

11 It is a question I am constantly confronted  
12 with by the technical people, "Well, why would you want  
13 to do that?" and the answer is, "I want it because I  
14 want it. I want to be able to read anything within  
15 seconds."

16 The first exhibit I would like to pass out is  
17 the specifications for the network which I and my  
18 colleagues have been working on for some 17 years. This  
19 happens to coincide with this announcement which is  
20 being sent out to graduate departments and other  
21 interested people in the field.

22 I will outline the highlights of it for you  
23 very briefly. Xanadu is the trademark to distinguish  
24 it from any other Hypertext network.

25 The basic concept is that we will store for a

1  
2 fee anything you want stored and get it to you as fast  
3 as can conceivably be done. We believe we have  
4 reached the mathematical limit and it is much better  
5 than most people would suppose, and our approach to  
6 copyright on this system has to be the following: That  
7 each document has an owner and the document's owner gets  
8 a royalty, period, every time it is called to the  
9 screen.

10           The way we want to base it is simply on time  
11 and screen area. If your document fills the whole of  
12 the screen for a whole hour, you get a whole hour's  
13 royalty. If it fills half the screen for one hour or  
14 fills the whole screen for half an hour, you get half  
15 the hour's royalty. If someone else wants to modify  
16 your document, and this is the direction that we put,  
17 his modifications are stored separately for what is to him  
18 his document. When someone puts forth the modified  
19 document, the original is drawn forward and the modifi-  
20 cations. Both authors share in the royalty as automat-  
21 ically determined by the size of the changes.

22           Now, this is obviously not a legal question.  
23 What I am proposing is a contractual question, but in  
24 my conversations with gentlemen in Washington, they seem  
25 to be interested in an approach that has not been



1  
2 mentioned, that the royalty and the copyright can be  
3 immediately kept track of and yet everyone can use the  
4 document any way he wants to without making a great deal  
5 of it.

6 I have a couple more things to show you. I  
7 have spoken of the distinction before for visualizations  
8 on a screen. I believe that the design of visualizations  
9 by which I mean systems of windowing, systems of usage,  
10 is an art form. I will give you one example which will  
11 show you what I mean by this. I call this one the  
12 Parallel Textface, and I worked on it for some length  
13 of time.

14 The principal of the Parallel Textface is to  
15 allow a reader with no training whatever to read  
16 through documents of any kind at great speed if he  
17 wishes, slowly and calmly if he wishes, to make changes  
18 in his own document, and furthermore, to be able to  
19 see the correspondence and connection to another document.

20 Now, these correspondences and connections are  
21 assumed to have been put in by an individual. In a  
22 diagram I show, let's say a Bill before the Congress,  
23 the House version and the Senate version. You can read  
24 forward or backward in either the House or Senate version,  
25 and because someone, a clerk or an author, has put in

these connections and shown by the lines between them, you can continually see which parts correspond even though the parts are not in corresponding sequence.

Now, let's go through the steps of this so you will see what I mean by simplicity and what I mean by user design. How do you go backwards and forward in the text? Well, you take your light pen. Assume you have a light pen for the controlling of the screen. You put your pen at the lower corner of the box. Let's say you are going to read the House version. You see that little extending line? If you want to go forward, you move the line up with your light pen and the text moves at the speed you show.

You see this lower left-hand corner of the page? If you want to move backwards in the text, you move the pen down and the text moves backwards at the speed approximate to however you move the light pen.

You see? I've taught you that instantly. There is no training involved. Now you can use that part of the system with no further difficulty. You can never forget how to do it.

Now try that some time on a so-called word processing system.

All right. The next control I show you are

1  
2 these lines between the two panels, this link between  
3 individual points in the text. I show you the beginning  
4 letter of the paragraphs to indicate just so you would  
5 see which. The paragraphs which begin with an E are  
6 linked by the line. The paragraphs which begin with an  
7 R are linked by the line. The paragraphs which begin  
8 with an M are linked. You notice that the paragraph  
9 which begins with a U has an arrow pointing down. This  
10 means it is linked to something not presently on the  
11 screen. If you want to see exactly what it is linked  
12 to, you just tag that U with your light pen and, ping,  
13 the corresponding paragraph is on the other side.

14 Now I have taught you that feature of the  
15 system. If you want to make changes in the text -- is  
16 this --

17 CHAIRMAN FULD: Yes, very helpful.

18 MR. NELSON: If you want to make changes in  
19 the text, I give you that strange-looking object in the  
20 center of the screen, not because it is pretty but  
21 because it is all in one place, and because once you  
22 understand it, you can't forget it. If you look at the  
23 right-hand side of the page, you will see how we  
24 broke it up. If you want to insert something, you  
25 touch the caret. Then you merely type the insertion in.

1  
2 If you want to rearrange, you touch the squiggly part  
3 of the diagram and cut the text where you wish to make  
4 the rearrangement. Hit the space bar and instantly  
5 the rearrangement occurs. If you want to make a dele-  
6 tion or copy, you can do so.

7 If you wish to do those things to the links,  
8 insert, rearrange, delete or copy, then hitting the  
9 links does that. Finally, if you want to move among  
10 previous versions to compare them, you use the little  
11 hourglass which I have given you as the word X in  
12 Xanadu. If you want to go backwards in time, you  
13 touch the top part of the hourglass; forward, you  
14 touch the top.

15 I gave you this as an explanation of what is  
16 meant by interactive system design. This design took  
17 months, years to work out. It is not pretty; it is  
18 meant to be functional, simple and clear. When I look  
19 about me at most computer systems, you will find that  
20 they aren't simple and clear, so this is the kind of  
21 thing which I am advocating and which I am trying to  
22 create in the line of home software that I am involved  
23 with.

24 CHAIRMAN FULD: May I ask a question?

25 Is it your view that all computer software

programs should be copyrightable or only various types?

MR. NELSON: I would see no place to make a distinction. It might be said that since texts of this kind can be put on paper, that the paper copy might form a basis for copyrightability. On the other hand, there are so many things that have to do with the interactive qualities of the event in an interactive system, it becomes a game like what do you know, what happens if, what happens if.

But to return to your question, I don't see a dividing line.

MR. APPLEBAUM: Does this mean -- I notice you have a copyright mark here -- that the caret insert would be then totally dedicated to your program system?

MR. NELSON: I should think not. It has obviously been used for centuries, and I would not presume to say that. It might turn up in a Court some day for someone else to decide, but I suspect that I have done something creative in those long years with this particular item, and under that suspicion, I am putting on that note.

COMMISSIONER HERSEY: May I ask a question about the creative processes, because you introduced that in terms of creating something like a writing.

1  
2           Suppose I want to invent a typewriter in the  
3 pre-typewriter days. I think very hard about what a  
4 writer does, and I may become very excited about this  
5 process and I may write many descriptions of what I  
6 want to do, and I may revise and cut things out and add  
7 things and go through many writer-like processes in  
8 devising this instrument.

9           Should my typewriter be copyrighted?

10          MR. NELSON: I don't think so. It is a  
11 machine, but a program is a piece of writing.

12          COMMISSIONER HERSEY: Now, when your program  
13 operates through one of these devices, does the viewer  
14 read the program or does he read the data that is  
15 presented through the program?

16          MR. NELSON: You mean if my user does not  
17 see the program, but many people would.

18          COMMISSIONER HERSEY: Does anybody read the  
19 program except in the early descriptive phases? I mean  
20 when it is operating in the machine.

21          MR. NELSON: Sure. It is intended that our --  
22 we are creating a line of software for the home called  
23 SOFTWORLD. It is intended that the program can be  
24 easily modified by anybody who understands the language.  
25 They can write in and make specific changes to suit

1  
2 their needs if they are conversant with the programming  
3 language.

4 COMMISSIONER HERSEY: When you spoke about  
5 mixing the works of authors, you said there is no  
6 problem about royalty and the copyright arrangements --

7 MR. NELSON: I didn't say there was no  
8 problem. I said I hoped we had a solution.

9 COMMISSIONER HERSEY: But the solution has to  
10 do with the writing.

11 MR. NELSON: Well, writing is data, if I  
12 understand you.

13 COMMISSIONER HERSEY: Yes, so that the issue  
14 arises not with respect to the program, but with respect  
15 to what the program operates.

16 MR. NELSON: Right. That is a separate  
17 topic.

18 COMMISSIONER HERSEY: I would just like to  
19 echo some of the words that you used to describe what  
20 the program will do.

21 "We will bring you whatever you want to read.  
22 We will store it and give it to you." You showed us  
23 the controls to move the text up and down. At one  
24 point you said it is meant to be functional.

25 It seems to me that these are things which

1  
2 the program does, not what it says. What it says in  
3 these communications of yours is said by the data  
4 which the program manipulates; is that not correct?

5 MR. NELSON: Right.

6 COMMISSIONER HERSEY: Thank you.

7 MR. NELSON: One point that you made in your  
8 searching paper on **copyrightability** of programs with  
9 respect to a program changing the condition of the  
10 machine, you referred to compiled and assembled programs  
11 which do reside in computers in a final form, which is  
12 never read, characteristically.

13 On the other hand, I think it should be  
14 pointed out that more and more programming is taking  
15 place in languages which are never compiled or assembled,  
16 the so-called interpretive languages like APL or  
17 Track language, which do not have a permanent residence  
18 or form other than that in which they are written.  
19 They are simply carried out one instruction at a time.

20 CHAIRMAN FULD: Are you making a distinction  
21 between that type of program and the other?

22 MR. NELSON: Well, I think the logical point  
23 that Mr. Hersey made in the paper about it becoming a  
24 part of the machine in some conceptual sense is not  
25 true for these languages. In fact, there is really a



continuum between these languages and the data base that is, I think, an important point.

The lowest level programming is the so-called Binary Code which entered into the memory in a lot of incomprehensible ones and zeros. That, however, is being enlarged and replaced by the higher level languages, such as the interpretive kind, and languages above that, the data table kind, which reads a table of data. These languages do not essentially have this characteristic, that's all I am saying.

COMMISSIONER HERSEY: Is it not the case with these languages that each instruction is dealt with by the computer one by one?

MR. NELSON: Yes.

COMMISSIONER HERSEY: And what happens?

MR. NELSON: What happens is that the language processor which is resident examines the individual instruction of the language and then goes and sees what is required to carry out that individual instruction and does it one by one from the table of the language processor.

COMMISSIONER HERSEY: But it is essentially the same transformation; is it not?

MR. NELSON: I don't think so.

1  
2 COMMISSIONER HERSEY: It happens successively,  
3 and you are feeding in a more consecutive kind of  
4 language possibly, but each step has to be digested  
5 by the machine and dealt with by the machine in a  
6 mechanical way, otherwise it can't operate.

7 MR. NELSON: Yes, but the storage of those  
8 lowest level steps in the Binary Code is in the language  
9 processor but not in the program in what is being  
10 referred to. The program itself is what someone would  
11 be applying for copyright for. As far as a copyright  
12 for the language processor, that is a separate question.  
13 I am speaking of a higher level program which is never,  
14 never translated.

15 COMMISSIONER HERSEY: That exception is what  
16 I am talking about. There is the transformation into  
17 the really operative program up to that point. Presuma-  
18 bly this language -- it may be fed in a natural  
19 language, and that presumably could be copyrighted with  
20 no change in the law as we have it now.

21 What happens to each step when it gets into  
22 the machine that transforms it from natural language  
23 into a mechanical language, which is a different matter.

24 MR. NELSON: It is very hard to visualize  
25 what these things are going to look like five years from

1  
2 now. Allen Kaye of Xerox has an interpretive language  
3 called Small Talk which is full of little pointing  
4 fingers and funny little pictures. Five years beyond  
5 that, who knows what we will have.

6 CHAIRMAN FULD: This is the copy of Time  
7 Magazine you referred to?

8 MR. NELSON: Yes.

9 I think the issue is substantially correct  
10 in its treatment of the impact of chip computers. I  
11 think that we will see some ten million sold in the  
12 next couple of years.

13 Texas Instruments is about to move. A number  
14 of companies are gearing up to sell computers, home  
15 computers, in the millions, and so the impact will be  
16 upon us fairly before anyone is capable of being ready  
17 for it, and the software that is presently available  
18 for these things is at a very low level.

19 The ratio selection of software has been  
20 disappointing to begin with. There are excellent  
21 computers, but this should not distract us from the  
22 next generation of graphics and of texts which would be  
23 involved, screens in great quantities. I am thinking  
24 ahead especially to three-dimensional graphics. I  
25 want to get to data base. I would like to talk about

1  
2 artistic data base and especially music graphics, games  
3 in three-dimensional worlds.

4 We can expect within the next two years the  
5 first totally synthesized motion picture. I know of  
6 two well capitalized major efforts, one on each Coast,  
7 to create a complete motion picture synthesis studio.

8 COMMISSIONER PERLE: What do you mean by  
9 that?

10 MR. NELSON: I mean a system whereby an  
11 artist creates a sculpture on a screen which is then  
12 transmitted with total realism so that Star Wars --  
13 Star Wars was made with plastic models, great big  
14 plastic models, but this can be done by computers.

15 NASA is presently using this for making  
16 propaganda films. The University of Utah is using it  
17 for making technical films, but the movie application is  
18 the really big kill. There is at least one motion  
19 picture forthcoming. When this happens, I assure you it  
20 will be staggering, comparable to Star Wars. It will be  
21 a very big deal and cult thing.

22 COMMISSIONER PERLE: People --

23 MR. NELSON: People, things, background with  
24 total realism. We have seen realistic sculpture. And  
25 to this can be added light, shadow and dimension. This

1  
2 was done by Ron Swallow.

3 I have brought along a few of these folders.  
4 I would like you to take out the one with this on the  
5 cover and open it. On Page Z which is also 126, depend-  
6 ing on which way you look at it, there are several  
7 illustrations made by a system in Arlington, Virginia.

8 Does everyone have this in front of him?  
9 It is Page 126-A or Z, depending on which way you are  
10 holding it.

11 VICE CHAIRMAN NIMMER: This looks like a  
12 cartoon. It doesn't look realistic.

13 MR. NELSON: This is an earlier system.

14 What I want to show you is that he is putting  
15 this concept to go into the home, so that you will be  
16 able to, on your T.V. screen, to get a full synthesized  
17 application with rapid animation on your own home T.V.  
18 screen.

19 Now, I would like to point out the little  
20 house in the first column. This little house is Ron  
21 Swallow's hobby. He has been working on it every day.  
22 Every day he goes in and adds a cornice or a part of a  
23 chair, and you can go inside the house and look all  
24 around it. That is a three-dimensional data base.  
25 Three-dimensional data bases will become the playground

1 of tomorrow. Kids will go into the Penny Arcade and  
2 walk through it and fight a dragon. Individual artists  
3 will produce Fairylands. You can have -- we can take  
4 the Oz books and animate them all or have animated  
5 three-dimensional color illustrations of this kind.  
6

7 Now I am talking three to five years away  
8 here, but it is definitely on the horizon. This system  
9 is working and is in prototype, so that what I am trying  
10 to say is that personal artistic data bases are going to  
11 be an important new form of publishing, and I refer to  
12 this three-dimension case in particular because of its  
13 general reality. It will be very widespread.

14 VICE CHAIRMAN NIMMER: May I ask you, in  
15 your description of your Xanadu system, say the owner  
16 does not determine whether a reader may create links to  
17 it or modified versions of it?

18 MR. NELSON: Do you mean he doesn't make the  
19 actual decision as to whether it is going to be done,  
20 or do you mean he doesn't consent to it?

21 VICE CHAIRMAN NIMMER: He doesn't give his  
22 consent to it being done.

23 MR. NELSON: When I publish a book, I have  
24 nothing to say about how a person scribbles on his own  
25 copy. The way it is being designed in Xanadu is that a

published book can have marginal notations or any other scribbles made on it. My assumption is we can't go on chopping down all these trees. We can't go on shipping these great rolls of paper. We don't have gasoline.

What we are trying to do is to start regarding the true form of publishing as the text itself, available instantly.

VICE CHAIRMAN NIMMER: Now, if someone does, let's say, make annotations in someone else's book and then publishes the book with the annotations or with changes, I think more accurately, if I understand what you are doing, with changes in the original work, exclusions and additions and alterations, that would be an infringement in the copyright of the author of the published version. Could you respond, or will you obtain the consent of the author of the underlying work to permit such changes to be made?

MR. NELSON: Naturally, I intend for everything to be aboveboard.

The books themselves which exist on paper--it will come to pass one, ten years, a large proportion of writing will not exist on paper at all, except with some eccentric who wants to have a paper copy to clutter up

1  
2 his desk with. As to what provision now we could make  
3 for allowing people to take liberties with these, well,  
4 I like to make margin notes. I like to make extensive  
5 notes on things.

6 CHAIRMAN FULD: You don't feel that authors  
7 will become extinct, do you?

8 MR. NELSON: No, because the machine is not  
9 creating the work. I am saying that the work is  
10 stored in the machine. I am not even saying that  
11 publishers will become extinct, but the publisher  
12 becomes someone who pays for the rapid access of a given  
13 document, just as the publisher is the man who pays for  
14 the printing on sheets of cellulose in today's world.

15 So what I am driving at here -- and I am  
16 sorry for, perhaps, the poor language structure -- let  
17 me step through it. Is a document whatever someone  
18 writes or changes or some combination of the two? Now,  
19 Mad magazine, about ten years ago, published a delight-  
20 ful version of the Gettysburg Address as it might have  
21 been corrected by a high school teacher written by  
22 Doodles Weaver from Spike Jones.

23 Now this is a nice example. We have an  
24 original document, and we have a set of changes, two  
25 separate documents which yield yet a third. The



1  
2 Gettysburg Address is owned by Abraham Lincoln or  
3 posterity. Doodles Weaver owns his modification. The  
4 modified document is then a combination of ownership,  
5 a hybrid ownership of the two.

6           The problem does arise if he is only making  
7 his annotations for his own personal use, but it is  
8 highly desirable, I think, from the point of view of  
9 scholarship and the ongoing snowball of western culture  
10 that we be able to pass along our comments in detailed  
11 form. I am only saying that it will always be valuable  
12 to be able to add marginal notes and to say, "I suggest  
13 the following corrections," and that is what this  
14 system would make simple.

15           It is intended to be the access to get right  
16 away what you intend to read right away, and stop the  
17 necessity of printing on paper and libraries.

18           COMMISSIONER PERLE: You said that the  
19 document owner would get a royalty each time the  
20 document was called to the screen, and that payment  
21 would be based upon the percentage of the screen occu-  
22 pied and the time that it was on the screen; is that  
23 right?

24           MR. NELSON: Yes.

25           COMMISSIONER PERLE: How did you arrive at

1  
2 that formula?

3 MR. NELSON: Very simple. I am assuming that  
4 connected and linked documents would become the writing  
5 of the future. That is what Hypertext means.

6 In the old days when somebody cites somebody  
7 else, Time cites what somebody else published earlier,  
8 we have to take the time to search for that direct  
9 quote. Here the original is on the screen and it says  
10 according to the great film critic so and so, then we  
11 can read the exact quote and follow it along to see the  
12 context of that, zap, bang. There's the original  
13 quotation. We are now in the source document.

14 COMMISSIONER PERLE: We now have the ability  
15 to attach a change onto that when that is on the  
16 screen?

17 MR. NELSON: No, this is something else. We  
18 call this Quote Window, a quotation from an original  
19 document which is also stored on the system. By gunning  
20 the quotation marks, we can make a part of the present  
21 document fade away and bring forth the source document.

22 COMMISSIONER PERLE: Okay, about the source  
23 document... I think though that you had said before that  
24 you now have that ability to take the source document,  
25 edit it, do something to it, make it a link document.

1  
2 MR. NELSON: That is a separate capability.  
3 The linkage is yet another thing.

4 COMMISSIONER PERLE: Now, will you be able  
5 to call up that revised link document or whatever it is?

6 MR. NELSON: Yes, assuming it will be  
7 published. That is why I am drawing a distinction. If  
8 you create a private document that is encoded, nobody  
9 can possibly read it, so even though you want to read it  
10 when you are in Los Angeles, you call it to the screen.  
11 No problem of anybody else getting into it.

12 Now, as to public documents, where you want to  
13 make private marginal notes, you do so and no one else  
14 can read your marginal notes. You cannot make a public  
15 document draw on a private document. That is logically  
16 incompatible.

17 In our system, that is part of the ground  
18 rules. We are stating the concept of ownership, the  
19 preservation or rights. Many people, many university  
20 types and hardware types say, "Oh, that is a thing of  
21 the past. Anyway, who reads?" Our point of view is  
22 we want very much to preserve the western tradition and  
23 just make it faster.

24 VICE CHAIRMAN NIMMER: Your proposed division  
25 of royalty, as I understand it, between the author of the

underlying work and the author of the adaptation, would be divided quantitatively; is that right?

MR. NELSON: Yes.

That may not at all reflect to the market outside of the computer. The underlying document may have a much greater value or it could be the other way around.

CHAIRMAN FULD: This is contractual between the two?

MR. NELSON: I am assuming for everyone who happens to put stuff, to make stuff publicly available in the network; if you want it publicly available in the network, you then deign to accept these terms.

VICE CHAIRMAN NIMMER: It is a uniform contract?

MR. NELSON: Yes, and the notion of uniform royalties is quite important in this sense. We want to have it provable that no one can look over your shoulder and tell what you are reading. In order to make that provable, we can't deliver, let's say, a nickel an hour delivery for every reader, and that's that. If we have to start doing that, the next step is, well, who read what, when, and we don't want to have that, no way.

1  
2 CHAIRMAN FULD: Mr. Nelson, apparently you  
3 have given a lot of thought to the problem. Your part  
4 of the problem is protection of software; what difference  
5 does it make whether it is copyrighted or some other  
6 device?

7 MR. NELSON: It has to do with the degree of  
8 protection. Speaking as a businessman vitally concerned  
9 for my special interests, let me explain how the copy-  
10 right issue affects us.

11 We have a program. It will not be a large  
12 program. We believe we have made some important  
13 discoveries that make this whole thing go. It would fit  
14 on one or two chips. We would like to put it in every  
15 home. We would like to make this available to everyone  
16 right there in the home computer.

17 If it is not protectable, we can only build  
18 a network where the home computer can dial into this.  
19 That is the problem that confronts me. I would like it  
20 to be public so that everyone can understand it, so  
21 that all the computer scientists can see that what is  
22 described, that, "My God, it really can't be broken."  
23 We want that degree of public accountability, and also  
24 the ability to see this and make it a universal system  
25 through the phone system.

1  
2 COMMISSIONER HERSEY: Mr. Nelson, there is no  
3 issue here of copyright on the one hand and no protec-  
4 tion on the other hand.

5 MR. NELSON: I am aware of that.

6 COMMISSIONER HERSEY: There are other modes  
7 of protection. I think we should be very clear that  
8 the question that we are talking about is the protection  
9 of data base, that when we talked about the writings  
10 that may have been mentioned and also the machine, the  
11 things that may go into it, the pictures that are put  
12 on the screen, you are talking about data base. We are  
13 talking about protection about data base there; are we  
14 not?

15 MR. NELSON: Mr. Hersey, I was emotionally  
16 affected by your piece and I wrote an emotional response  
17 to it.

18 COMMISSIONER HERSEY: Oh, sure, we all get  
19 excited. I do, too.

20 CHAIRMAN FULD: What you said goes to include  
21 software?

22 MR. NELSON: Yes, that is our big problem. We  
23 are concerned for the libertarian and freedom issue.

24 CHAIRMAN FULD: As long as protection is  
25 accorded by some other method, why copyright?

1  
2 MR. NELSON: We would have to look at the  
3 protection. If it is truly the kind of protection we  
4 want, then that's great and we are very anxious to make  
5 this a public thing.

6 VICE CHAIRMAN NIMMER: With respect to this  
7 particular protection, assuming you have contractual  
8 relations with all the authors you want to input into  
9 your system, that is the data base protection; doesn't  
10 that adequately protect you against competition without  
11 a need for the program copyright as well?

12 MR. NELSON: I wouldn't like to think of it  
13 that way. I don't want to lock people into this system.  
14 I want to invite people into this system and leave the  
15 door open.

16 VICE CHAIRMAN NIMMER: I am not sure I under-  
17 stand it.

18 MR. NELSON: Maybe I didn't understand your  
19 question.

20 VICE CHAIRMAN NIMMER: Well, here you are going  
21 to put all this time, effort, investment, all the world  
22 literature into your computer.

23 You do this, and with respect to that litera-  
24 ture which is not in the public domain, you have  
25 presumably made contractual commitments with the copy-

right authors of those works.

MR. NELSON: Right.

VICE CHAIRMAN NIMMER: And I don't know whether those commitments would be exclusive with respect to computer usage or not, but assuming for the moment it would be, then that in itself would preclude anyone else from reprocessing those works via computer, even if your software program for this assemblage of material is completely unprotected.

MR. NELSON: That is very good. I appreciate the legal advice.

COMMISSIONER LACY: However, in computer software there would not be any protection against someone else taking advantage of the very, very substantial amount of time in order to establish a rival system to contract with other authors to do the same thing.

VICE CHAIRMAN NIMMER: That is beyond my depth, but that kind of program wouldn't have to be copyrighted. It could be originated without --

COMMISSIONER LACY: Normally with great labor, enormous labor. Months and months and months.

MR. NELSON: Years and years for the basic techniques.



1  
2 COMMISSIONER LACY: Very valuable, expensive  
3 property.

4 I take it though, as Mr. Hersey has pointed  
5 out when you were talking about the three-dimensional  
6 works of art and so on, you were talking about data  
7 base. Your concern does in fact extend to programs  
8 in software as well as this, although you want a mode  
9 of protection like a copyright. You didn't want a mode  
10 of protection that permitted you to make widely known  
11 and available the program without any reliance on  
12 secrecy and restraint.

13 MR. NELSON: Yes, and insofar as there was an  
14 element in Mr. Hersey's paper on this, I want to  
15 respond also to the artistic side of it, but, yes.

16 COMMISSIONER LACY: You have no objection to  
17 it being protected by the same pedestrian device that  
18 protects telephone directories and street guides?

19 MR. NELSON: With respect to data base, I  
20 think the principal point is that we are going to see a  
21 vast army -- if that is the wrong term, a vast rabble of  
22 creative people rushing in and using the computer in new  
23 ways.

24 I think of the extraordinary talent that is  
25 going into the California home computer movement in

1  
2 particular. Their annual fair last year was a gather-  
3 ing of talent the likes of which I have never seen.

4           You can now get a dozen music synthesizers for  
5 your home computer. You can get a dozen graphic  
6 devices for your home computer, and we are going to see  
7 people distributing art works on these things right  
8 away.

9           In fact, John Whitney, who made a number of  
10 computer films, has discussed with me the possible  
11 distribution of graphical programs, so we are not  
12 talking about something that is far away. We are  
13 talking about something that is imminent.

14           COMMISSIONER DIX: Mr. Nelson, if we get  
15 copyrightability of computer software, do you see it  
16 applying or being applied to home systems such as your  
17 Xanadu, or a series of separate copyrights in bits and  
18 pieces such as the ability to produce Parallel Texts?

19           MR. NELSON: Well, you see, I call that a  
20 Parallel Textface, meaning a unified design. I really  
21 don't know how this will be.

22           I am the only person that I know of who is  
23 trying to design very simply and easily to use this.

24           Allen Kaye, again, has done excellent work  
25 in this area, but he seems to just toss it over his

1  
2 shoulder as just a bagatelle that follows. That may be  
3 from the way he thinks, perhaps, but there aren't many  
4 people operating in this area.

5 COMMISSIONER DIX: I guess that you are  
6 speaking today as an entrepreneur as well as a  
7 programmer.

8 MR. NELSON: Yes.

9 COMMISSIONER DIX: In this interrelated  
10 system which you would like to protect, is there a need  
11 for protection also though for just the ability to do  
12 one single action which might not be used in your  
13 system which you might license to half a dozen compet-  
14 ing systems?

15 MR. NELSON: It might be. Let me point out  
16 that obviously people have been editing texts and  
17 people are editing texts on screens all over, but I  
18 would submit that what I would like to think is that  
19 the unification and integrity, that is hard to come by.

20 Anybody can delete, insert or rearrange  
21 texts, so the most creative part of what you are  
22 talking about is this interrelation of the parts in a  
23 sense. This is a new area. It is graphical, but it  
24 involves the moving and tunneling through different  
25 possibilities, and instantly.

1  
2 This is a new medium here.

3 CHAIRMAN FULD: Thank you very much, Mr.  
4 Nelson. Very informative and interesting.

5 Our next speaker is Mr. Michael Harris,  
6 Chairman of the Board of Copyright Clearance Center.

7 He appeared before us last year. He will  
8 give us a report of the activities of his organization.

9 MR. HARRIS: Michael Harris, Chairman of the  
10 Board of Copyright Clearance Center.

11 CHAIRMAN FULD: Mr. Harris, we are glad to  
12 see you again.

13 MR. HARRIS: I have written copies of the  
14 statement that are being distributed.

15 My name is Michael Harris, and I am Chairman  
16 of the Copyright Clearance Center. As all of the  
17 members of this Commission know, the Copyright Clearance  
18 Center is a non-profit organization created by  
19 representatives of authors, professional societies,  
20 publishers, information companies and users of educa-  
21 tional and scientific material to facilitate photocopy-  
22 ing by libraries and other users beyond that permitted  
23 by Sections 107 and 108 of the U.S. Copyright Law.

24 As of today, the CCC has been operable for  
25 one and one-half months. Experience in this short time

1  
2 is much too limited to permit an evaluation of the  
3 effectiveness of CCC, however one would evaluate it.  
4 But there is substantial evidence that CCC is a viable  
5 concept and has made a surprisingly strong start  
6 toward ultimate achievement of its objectives, and I  
7 shall report now on progress to date.

8           As of February 1, 1978, 122 publishers had  
9 registered 1,120 periodicals with the Center. That  
10 number has increased, but the data here is only for the  
11 first month of operation. This response to our initial  
12 announcement to publishers is remarkably good in that  
13 the number of journals registered is almost one-half of  
14 the 2,500 periodicals initially solicited for registra-  
15 tion. Eighty-eight percent of the periodicals are  
16 published in the United States and 12% in other coun-  
17 tries, including England, Holland, Germany and Canada.  
18 Given the necessarily short notice for registration and  
19 instructions on how to register, and the long lead time  
20 required to prepare periodicals for registry, the  
21 results so far are better than we anticipated.

22           The list of periodicals will surely increase  
23 as more publishers, particularly foreign publishers,  
24 become acquainted with CCC's operations and take  
25 appropriate steps for registration.

1  
2           So far as we have been able to analyze the  
3 list, there is a healthy mix of titles published by  
4 commercial and not-for-profit organizations, with 67%  
5 in the first category and 33% in the second.

6           We have not had time to analyze the composi-  
7 tion of the list of registered periodicals by subject  
8 areas. It is clear, however, that scientific,  
9 technical and medical journals heavily predominate.  
10 This is fully in accord with the emphasis consistently  
11 placed on the need to photocopy periodicals in these  
12 fields even though subscribers to business and other  
13 kinds of periodicals may wish for much greater partici-  
14 pation of such periodicals, a matter I shall refer to  
15 later.

16           It is also clear that a substantial portion  
17 (about 25%) of the most heavily cited scientific  
18 periodicals are also in the system. In some fields  
19 such as physics and chemistry, it is safe to say that  
20 well over half of the literature published in the  
21 United States in periodicals is now in the CCC system.

22           We have become increasingly aware of the need  
23 to include business and other non-scientific periodicals  
24 in the system, and we have initiated measures to enroll  
25 them. This may require some modest but obtainable

adjustments to the system, a matter currently being discussed with publishers of such periodicals. Similar problems are being discussed with book publishers who desire to enter book titles in the CCC system. All of these matters take time to resolve because of their complex nature, but we regard them as developments clearly supportive of the CCC concept. These factors plus the continually increasing list of registered periodicals fortify our confidence in the CCC concept as originally conceived.

Registration of user organizations started later than registration of publishers. As of February 1, 1978, 169 user organizations had registered, registration indicating that they intend to use CCC with CCC consequently assigning a registration number and taking other steps to facilitate operation of the system. Registration of many users will take place when they first make photocopies and report them to CCC without preregistering.

Of this number of registered users, 52% are corporate (for profit) users and 48% not-for-profit. Of the not-for-profit users, 65% are academic libraries, 10% public libraries, 9% government libraries, 14% professional and trade associations, and 2% unidentified.

1  
2 Although the total number of users registered on  
3 February 1, 1978, is too small to warrant forecasts  
4 about future developments, it is encouraging in that it  
5 shows representation of users in all categories, and  
6 that the number of registrants is largest among  
7 corporate and academic libraries, probably the two  
8 categories that are most called on to provide copies  
9 beyond that legally permitted.

10 The number of user registrants increases each  
11 day, but there has not been enough experience as yet to  
12 speculate on the total number which will ultimately  
13 register. It seems safe to assume that the earliest  
14 registrants are those who are most cognizant of Copy-  
15 right Law and dependent on photocopying for their own  
16 and their clients' needs, and that this trend will  
17 continue for some time. It also seems safe to assume  
18 that the number of user registrants will increase  
19 significantly as user organizations and their personnel  
20 become familiar with the provisions of the Copyright  
21 Act and/or find that their requirements for copies  
22 cannot be met expeditiously and efficiently unless they  
23 use the services of CCC.

24 CCC's activities have necessarily been  
25 focused on getting the system in proper order, that is,



1 registration of periodicals, users and perfection of  
2 systems employed. It will be some time from now before  
3 there will have been sufficient experience to realistic-  
4 ally forecast the total volume of transactions that will  
5 be handled annually by CCC, the total volume being the  
6 rough indicator of the acceptability and utility of CCC  
7 to publishers and users alike, and to evaluate cost and  
8 income assumptions on which CCC's operations were  
9 based.  
10

11 Finally, I would like to comment on a few  
12 other aspects of CCC's operations. The office has been  
13 opened at 310 Madison Avenue, New York City, a different  
14 address than that which appears on the letterhead here.  
15 The delivery system is in place and all details in  
16 regard to registry of periodicals, reporting, transac-  
17 tions, billing or acceptance of prepayments, remittance  
18 of fees to publishers, et cetera, have been worked out,  
19 and the system is fully operable. Adjustments may be  
20 made, if necessary, without interruption to the system  
21 to accommodate books, magazines, and other publishing  
22 products.

23 The CCC Board has decided to pay foreign  
24 publishers in amounts that may be due them on the same  
25 basis as American publishers and not defer payments

1  
2 pending negotiation of mutually acceptable payment  
3 arrangements with foreign collecting societies, a  
4 decision which we believe will facilitate registration  
5 of foreign publishers.

6 Mr. David Waite, President and Operating Head,  
7 is with me today, and both of us will be happy to  
8 answer any questions members of the Commission would  
9 care to put to us.

10 Thank you very much.

11 VICE CHAIRMAN NIMMER: Mr. Harris, I would  
12 like to read to you a brief passage from a letter that  
13 a librarian wrote to me indicating problems that have  
14 been encountered with the CCC. I would like to get  
15 your reaction, if I may.

16 These are just as following: Royalty  
17 unspecified in some instances, royalty unspecified on  
18 proceedings and edited collections of articles, royal-  
19 ties widely varying, royalties widely varying in one  
20 issue, royalties over 62% of the issue price of a  
21 popular journal, few journals in our subject registered  
22 with CCC, and no response from publisher to a letter  
23 trying to arrange direct payment.

24 Any comments you care to make?

25 MR. HARRIS: My God, you have five questions.

Well, first of all, let me explain in general.

This is a new system, and it takes time for people to adjust fully to it and to conform completely with the technical requirements; also, some of the data printed on coding and so on is not always understood by the user, and sometimes we have found cases that may be simply a matter of not having understood the system.

First, as to royalties not specified, there are some instances in which royalties are not specified because the publisher desires no compensation for the photocopying.

VICE CHAIRMAN NIMMER: You mean the publisher does not want any representation by Xerography or you mean the publisher is permitting it --

MR. HARRIS: Permitting it without compensation.

Royalties do widely vary in amount. That is because publishers set their own individual prices. Because of Anti-Trust Laws, we cannot consult among ourselves about prices. Moreover, publishers often are in the dark in regard to the volume of photocopying of their particular journals, what expected income they can obtain from it, and even the extent to which their journals may be harmed by photocopying.

1  
2           The first opportunity that many publishers  
3 would have to discover what other publications are  
4 charging came about when the first list of charges was  
5 published. No one had any idea what any other publisher  
6 would charge at that point. Those are all in the  
7 publishing manual though.

8           It is true that there are some widely varying  
9 charges. I can understand some of them. I wouldn't  
10 attempt to speak for any publisher setting any price,  
11 but I do understand that in certain cases dealing with a  
12 translated journal of very limited circulation of which  
13 the costs of publication are extremely high and the  
14 publisher in that case took into account the costs of  
15 that journal, assuming he had in mind the subscription  
16 price and the desire to protect the original subscribers  
17 to it by not charging so low for the reproduction that  
18 it would pay for people to give up subscriptions and  
19 therefore -- those are assumptions, because I generally  
20 do not know why a publisher charges a certain price.

21           I can tell you individually as a publisher for  
22 all the journals that we publish that we simply decided  
23 to set what we thought was a very low price, because we  
24 were operating in the dark. We decided to support the  
25 system. We felt we would know only as a matter of

experience what would be a better price to charge.

Now, there are prices which may vary per issue. The Journal of the American Association for the Advancement of Science is a member of CCC. I really don't know what their prices are, and so far as I can determine, their prices vary with the length of the articles. In their case, I would assume that that is the case in many cases.

In my own company, we have a flat price for every journal. We have the same price for every article, irrespective of size. Not all publishers agree with that.

Now, in the case of a few periodicals that individual librarians may desire, that is quite likely in a great many cases. It would not be until this system has been operable for some period of time that we will have obtained, first of all, the number of journals that we would like to have in the system. In the scientific, technical and medical areas, there are some important journals in those areas that are still not in yet.

In particularly the foreign journals, we believe that we will obtain a significant number of them, and the amount varies from field to field. We are

strong in chemistry and physics. I think it is fairly safe to assume that in at least one of those fields, we have a majority already in CCC. That is not true in every discipline.

We are particularly weak in the area of business. That is largely because, at least so far as we are aware, of the fact that we attempted to focus on scientific and medical journals. Those have been the center of so many of the discussions on photocopying practices and the need for photocopying. We hope to increase that list of business and other kinds of magazines, particularly for industrial corporations or business companies who rely very heavily on business magazines and photocopy them, perhaps to the same extent or even more than scientists photocopy scientific journals.

As to the writing to publishers and obtaining no response, I don't know that that is as a result of the creation of CCC. That has been a phenomenon that has been known before.

We had a meeting of the Board of Directors of CCC this morning, and one of the matters that we took up was how to facilitate the handling of permissions, and we would ask the publishers to notify users that when the

1 publisher gets a request for permission to photocopy a  
2 journal in CCC, that he should inform immediately the  
3 inquirer of the existence of CCC that his journal is in  
4 it, and that the journal can be simply photocopied and  
5 payment made to CCC.  
6

7 We have asked that publishers inform us and  
8 we will notify that user that the journal is available  
9 through CCC. Other than that, I don't know. If I  
10 knew more about the particulars of the experience, I  
11 would be able to comment further.

12 VICE CHAIRMAN NIMMER: Thank you. Your  
13 response has been helpful.

14 On one item, the royalty over 62% of the  
15 issue price on a popular journal, I don't know how  
16 representative that is, but I wonder in the overall  
17 picture how reasonable the prices are in relation to the  
18 price of a journal.

19 MR. HARRIS: Well, I suppose that reasonable-  
20 ness depends on where you sit. I wouldn't know how to  
21 judge that.

22 I can tell you quite frankly, in the case of  
23 my own company, we don't take into consideration the  
24 length of the journal, the subscription price of the  
25 journal or the issue or what-have-you. We think that is

reasonable for us, given our circumstances.

I think the question of reasonableness perhaps starts even before the photocopying charge is considered. It goes really initially to the reasonableness of a subscription rate or the charges for a subscription.

So far as we are aware, the median rate, and I cannot vouch fully for these figures because we have not had sufficient time to devote to analysis, the median rate is about \$2.25; is that correct, David?

MR. WAITE: Correct.

MR. HARRIS: We at CCC can do nothing about that. Again, we are a service organization completely, and we accept whatever publishers will charge. It is the publisher's responsibility to set the price. Our role in price-setting is nil.

VICE CHAIRMAN NIMMER: Right, but obviously the viability of CCC depends in part upon the price being realistic.

MR. HARRIS: Oh, yes, and this is sheer personal speculation on my part, assuming that when this manual list of publishers' fees was distributed, that every publisher carefully reads this to compare his price to the prices of other publishers. Whether or not



1  
2 he will take any compensatory action, I have no idea,  
3 but it will give him an idea of the range of prices and  
4 how his price level compares to others.

5 This will be the first opportunity he will  
6 have had to evaluate the price structures of those  
7 journals with the price structures of journals of  
8 other publishers.

9 ASSISTANT DIRECTOR FRASE: Mr. Harris, is the  
10 manual the prices which will be charged from January 1st  
11 or does it also deal with prices publishers are charging  
12 for previously published articles?

13 MR. HARRIS: The manual deals with prices  
14 that are pre-January of 1978.

15 Now, the material for post-January 1, 1978  
16 can be obtained from each journal by simply looking at  
17 the codes that are published.

18 ASSISTANT DIRECTOR FRASE: When you say the  
19 medium price was \$2.25, was that pre-1978?

20 MR. HARRIS: That is pre-1978. I made an  
21 assumption there that the prices for post-January, 1978  
22 will be roughly comparable. I may be wrong in that.  
23 That is an assumption.

24 ASSISTANT DIRECTOR FRASE: Mr. Harris, I  
25 wonder if you could kind of jump back and forth between



1  
2 this has been basically our desire to preserve the  
3 advantages that we now have out of the Copyright Law.

4 That led us to think -- and I have said this  
5 any number of times to other publishers in other forums  
6 before the international groups, the association of  
7 international groups of scientific and medical publish-  
8 ers, before our own American association, and I have  
9 suggested that this is the advantage, not the fact that  
10 this is going to result in any substantial income to  
11 publishers.

12 I believe that that is accepted by -- I cannot  
13 speak for others --

14 ASSISTANT DIRECTOR FRASE: If we follow this  
15 up again, the logic is to collect for usage; would it  
16 be logical then to say that the subscription rate should  
17 be based on the usage made of that journal?

18 MR. HARRIS: If you were to endeavor to do  
19 that, you would not take into account all the costs of  
20 the journal, and the journals at least in my experience,  
21 the price of journals start with the actual costs of  
22 production and distribution of the journal.

23 ASSISTANT DIRECTOR FRASE: I have one other  
24 question along the same lines, if I may.

25 From what you have said, I gather -- and am I

correct in assuming -- that you are saying the reason for your pricing structure and your interest in the Copyright Clearance Center is to protect -- maybe that is the wrong word, but the current system of publication?

MR. HARRIS: That's right.

ASSISTANT DIRECTOR FRASE: To what extent have you considered alternate forms of publication?

MR. HARRIS: Every day of the week, because we are aware of a number of problems. As publishers, we are aware of new technologies that are being created that may change the form of publications. Electronic transmission is one example. Publication on demand, which would be greatly facilitated by electronic transmission.

There are a great number of problems that we have to be concerned with for our own protection, the very problem that we are well aware of of the vast number of journals, the difficulties of librarians and of scientifically coping with the enormous body.

ASSISTANT DIRECTOR FRASE: Let me see if I can pursue this a little bit more.

I think it is understandable, this logical development, but if you look at the usage, the readership, if you will, of some articles, do you think that

1  
2 this system is going to be effective in protecting your  
3 subscription to your journals in view of the evidence  
4 that some journals are read so seldomly?

5 MR. HARRIS: I don't see any direct relation-  
6 ship between the readership, the number of readers of  
7 the journals and this system. I may be wrong in this.

8 That is an extremely interesting problem.  
9 Whenever a publisher decides to publish a new journal,  
10 generally at the request of people in the field, it is  
11 calculated very carefully what the potential readership  
12 will be.

13 I know that my own company has had a very  
14 conservative policy in respect to publishing new  
15 journals, perhaps too conservative, and one of the  
16 reasons -- and we find that we have rejected, I don't  
17 know how many times, more proposals for journals than  
18 we have accepted. In the last five years, we have  
19 created five journals, which is a very, very small  
20 number for a publisher of our size.

21 Now, we invariably get into a dispute with  
22 the people who are interested in the journal because  
23 they will say that, "Even though you believe that the  
24 readership will be small, it is extremely important to  
25 us and we would like to have this journal." That is a

1  
2 perpetual problem. It goes on particularly in the case  
3 of scientific journals, in disciplines which already  
4 have journals in the field or new or emerging disciplines  
5 or disciplines that have been split off or have become  
6 fragmented into new specialties.

7 I don't see a relationship.

8 ASSISTANT DIRECTOR FRASE: If I may pursue this  
9 a little further, then I will be through. Some studies  
10 indicate that maybe 50 to 60% of these subscriptions to  
11 major journals have less than one use per issue. If  
12 they were to drop their subscription and rely on their  
13 royalty system, then what would happen to the economic  
14 viability of your journal if you aren't planning to make  
15 enough from the royalty payments?

16 MR. HARRIS: Well, if you will let me start  
17 first with a statement of belief, I have said publicly  
18 in several forums that the only way that I could think  
19 of for librarians and others to cope with the prolifera-  
20 tion of journals, and the fact that there are many cases  
21 where journals are read very rarely, is for the market-  
22 place to decide, for them to decide whether they really  
23 needed that subscription for the journal.

24 I liken their problem to the problem of those  
25 who are responsible for providing funds for research. It

1  
2 is a very similar problem of how to distinguish between  
3 what should be undertaken and researched and what  
4 should not; what should be published and what should not.

5           Parenthetically, we constantly are trying to  
6 cope with that without a great deal of success. We have  
7 to start all over again.

8           Now in that respect, so long as the subscrip-  
9 tion is legally under the Copyright Act, I think the  
10 marketplace has got to determine whether this journal  
11 is worth the subscription.

12           COMMISSIONER LACY: Mr. Harris -- incidentally,  
13 I hope we will have some good news for you on publica-  
14 tions -- I suppose in starting a new organization like  
15 this, one of the problems you have is not only a very  
16 considerable amount of confusion in the sense of  
17 bumping around with the actual procedures, but some  
18 misunderstanding of policy. I sense that both  
19 publications, magazines and running a large library, you  
20 get those perceptions of the operation and the signifi-  
21 cance of CCC, I just want to make sure my own understand-  
22 ing of what CCC's intended purpose and function is is  
23 correct.

24           Now, as I understand it, any photocopying  
25 that a library is free to do under either Sections 107

or 108 is of no concern to CCC.

MR. HARRIS: That's right.

COMMISSIONER LACY: So your intent is not to limit or restrict anything. You are not concerned with the copying that the library may do lawfully.

Am I correct in that understanding?

MR. HARRIS: Yes, you absolutely are, but I would like one point to be considered carefully.

CCC is not concerned with monitoring the Act or applying it. That is not within our province at all. We are simply a service organization, and the published literature has said quite clearly, which we distributed to I don't know how many thousands of libraries, close to 22,000 copies, we started off by saying, "Take full advantage of the copying you are permitted to do under the Copyright Act. When you get to copying which you desire to do which is beyond that permitted in the Act, we are here to serve you."

COMMISSIONER LACY: That really wasn't the point I wanted to follow up on.

If I understand you, it is not part of your job to decide what the limits of the sections are? It is not CCC's job to police compliance with it?

MR. HARRIS: That's correct.



1  
2 COMMISSIONER LACY: So in a sense, it is not  
3 there to limit the library's freedom, but only to give  
4 it the opportunity to enhance its freedom to copy by  
5 giving it a chance to make copies which the library  
6 believes it has to have permission to do so?

7 MR. HARRIS: Yes. I only have one copy here,  
8 but this is the brochure that we sent to 22,000  
9 libraries, stating to take full advantage of those  
10 exemptions as provided in the law, and the first section  
11 is devoted to that.

12 Number 2, use the CCC fee payment method when  
13 permission to copy is required.

14 COMMISSIONER LACY: Do you think that that is  
15 generally understood by libraries?

16 MR. HARRIS: I really don't want to place  
17 myself in the position that I, as a publisher, would  
18 feel very free to talk to, but as Chairman of CCC --

19 COMMISSIONER LACY: I am talking specifically  
20 of CCC because I am quite aware of the experience  
21 publishers may have in distinguishing where the limits  
22 of 107 and 108 are and may have problems in interpreta-  
23 tion, but just CCC itself. That is not involved in  
24 that?

25 MR. HARRIS: Not in the interpretation, no.

1  
2 COMMISSIONER LACY: If a library is free to  
3 copy anything without going to CCC, you are not going  
4 to --

5 MR. HARRIS: No, that is a matter for public  
6 law.

7 COMMISSIONER LACY: It is only if they  
8 voluntarily come to you as a means of getting permission  
9 without the necessity of clearing it title by title.

10 MR. HARRIS: We get any number of requests,  
11 written, telephone and others, for our assistance in  
12 interpreting the law from libraries and others who --  
13 for instance, specifically asking us what could we do  
14 under this?

15 We have carefully avoided that because we  
16 think, to preserve our integrity, we have got to divorce  
17 ourselves completely from any question of interpretation  
18 or monitoring or police action or anything of that sort.

19 COMMISSIONER LACY: I do have a feeling that  
20 this still has not been completely understood in the  
21 libraries. For example, it is thought of as restrictive  
22 rather than as permission-granting.

23 MR. HARRIS: Oh, yes, CCC itself has become  
24 aware of librarians who had never heard of its existence.  
25 They have never said that to us directly, but this comes

1  
2 to us indirectly, other instances of that kind.

3 COMMISSIONER WILCOX: I wonder if I could  
4 carry through something here which I didn't quite get  
5 clear.

6 For the titles for which publishers have  
7 said that they don't specify a royalty payment, what is  
8 the role of CCC in that?

9 MR. HARRIS: Well, please correct me if I am  
10 wrong in this, David, but there are publishers who have  
11 said that for the pre-January 1, 1978 period, they do  
12 not require any fee, but they will place a fee on  
13 publishing thereafter. In some cases, a publisher will  
14 say no fee in order to make it clear to the user that  
15 the user is perfectly free to copy.

16 One of the problems a user has is if there  
17 is no code present at the bottom of it and there is no  
18 statement by the publisher, what does the user do about  
19 it, and we have encouraged publishers to state that if  
20 they do not desire a fee to be paid and they want to  
21 declare that copies may be done without payment, that  
22 they indicate that by simply putting zero at the bottom  
23 of the page.

24 COMMISSIONER WILCOX: If they put in your  
25 folder that they are not interested in collecting or if

1  
2 they put zero on the bottom of the page, if a library  
3 consulted you about a copy, would you send that back to  
4 the librarian and say, "No, I don't need to collect  
5 anything," or would you collect it or --

6 MR. HARRIS: If there's a zero, I think  
7 there is no obligation on us at all, is there?

8 MR. WAITE: No. The one thing that we have  
9 discovered is that to push it through the system, we  
10 can detect that at the beginning and thus not incur  
11 processing costs.

12 COMMISSIONER WILCOX: In other words, that  
13 would not go through your system?

14 MR. WAITE: It would not be processed.

15 MR. HARRIS: If it does go through, if I am  
16 correct, we are not required to have it go through the  
17 system. If we got one, we wouldn't want to put it  
18 through because it would cost us money.

19 COMMISSIONER WILCOX: What do you do then with  
20 some foreign publications that you have no arrangements  
21 with?

22 MR. HARRIS: But it wouldn't come to us if  
23 they are not registered.

24 COMMISSIONER WILCOX: Oh.

25 MR. HARRIS: The only ones we would get are

those who publish a code, a foreign publication, unless I misunderstood your question.

COMMISSIONER LACY: You are talking --

VICE CHAIRMAN NIMMER: Are you talking about countries not members of the Universal Copyright Convention? Do you represent publications in those countries?

MR. HARRIS: We do not, no.

VICE CHAIRMAN NIMMER: You would not really be able to give anybody permission unless they are registered with you and give you that right?

MR. HARRIS: That's right.

COMMISSIONER LACY: If they are registered with you, they will indicate a royalty or no royalty?

MR. HARRIS: That's right.

VICE CHAIRMAN NIMMER: Do you have some members who, as to certain of their publications, they are simply not licensing those for publishing through your organization?

MR. HARRIS: Has that occurred?

MR. WAITE: No one has made such an explicit statement.

COMMISSIONER LACY: There certainly will be some of the licensed journals, one at least.

1  
2 MR. HARRIS: Not expressly to us so far.

3 COMMISSIONER WILCOX: You do have publishers  
4 who have registered, who have said that they do not  
5 care to set a fee royalty; is that correct?

6 MR. HARRIS: Oh, yes.

7 COMMISSIONER WILCOX: What do you do if you  
8 got -- are those the ones you would not process, or are  
9 you saying that if in the case that a library would be  
10 exempt from constraint in using the Copyright Clearance  
11 Center or they would be free to make copies as they see  
12 fit?

13 MR. HARRIS: If a publisher puts zero on it,  
14 that library is free to make all the copies it wants  
15 without any payment. They have no need to report to us.

16 If they report to us, we don't want to handle  
17 it because it costs us money to process it, and we  
18 would not recover it.

19 COMMISSIONER LACY: You spoke of this \$2.50  
20 average cost of pre-January 1, 1978. Am I correct  
21 that that is an arithmetic average of all the rates  
22 you've got, or is it a --

23 MR. HARRIS: It is a median.

24 COMMISSIONER LACY: A median?

25 MR. HARRIS: Yes.

1  
2 COMMISSIONER LACY: But it might turn out to  
3 be, if it should be the case, that the more widely  
4 circulated and more widely copied journals have rela-  
5 tively low copy fees. They may have 50¢ or 75¢ on those,  
6 and the infrequently copied, at least the copying which  
7 would come to you, they would have the high fees? And  
8 that the actual average cost per item processed might  
9 be considerably lower than the median, if that hypothesis  
10 is true; might it not?

11 MR. HARRIS: Yes, but we have no genuine  
12 information.

13 COMMISSIONER LACY: I realize you don't, but  
14 I am just saying that the fact that this median is  
15 \$2.50, one wouldn't necessarily conclude this would  
16 prove to be the average fee collected in practice.

17 MR. HARRIS: That would vary, depending on  
18 which journals.

19 COMMISSIONER MILLER: Would you register a  
20 journal that you know is not validly copyrighted?

21 If a publisher seeks to register with you a  
22 journal that has not borne, let's say, a copyright  
23 notice throughout its entire history, will you register  
24 it?

25 MR. HARRIS: We would hope not to. We might

1  
2 do it mistakenly and not discover it initially, but I  
3 don't know that we have actually considered the case.

4 I can tell you in my own personal reaction to  
5 it that we are there to protect those journals which are  
6 copyrighted. I don't know that we have had any case of  
7 the other coming up, of a journal not copyrighted.

8 MR. WAITE: Not that we are aware of.

9 MR. HARRIS: We haven't even considered the  
10 possibility because no one is under any obligation to  
11 pay.

12 COMMISSIONER MILLER: Well, I know that, but I  
13 am just wondering, those who are not conversant with  
14 their rights, and presupposing you are not making an  
15 inquiry as to the copyright, the validity of the copy-  
16 right, it is only a very small point, but I am just  
17 wondering what your attitude is to the consumer groups  
18 as opposed to the publishing group.

19 MR. HARRIS: We have assumed all along that the  
20 constituency of those we deal with is copyrighted material.

21 DIRECTOR LEVINE: Unless I am mistaken, you  
22 said there are no collections for journals prior to  
23 January, 1978 -- no, am I wrong on that?

24 MR. HARRIS: Yes, yes, on this list.

25 DIRECTOR LEVINE: After January?



1  
2 COMMISSIONER MILLER: The problem obviously  
3 is before that.

4 VICE CHAIRMAN NIMMER: Do you have any  
5 licensing for journals that are 28 years old?

6 COMMISSIONER MILLER: It comes into the  
7 question of whether the journal was registered for a  
8 second time of copyright.

9 MR. HARRIS: I have no answer to that.

10 COMMISSIONER LACY: You as a group serve for  
11 those who are coming to you for clearance or with  
12 respect to copying which they themselves believe there  
13 is a required permission for them under Sections 107 and  
14 108. They can certainly look for the copyright notice.

15 COMMISSIONER MILLER: But many view this as an  
16 easier way out of a question they don't want to cope  
17 with, and they might end up paying for things they don't  
18 have to pay for.

19 COMMISSIONER LACY: I guess they would rather  
20 pay than find out. It goes the other way, you know.

21 CHAIRMAN FULD: I don't think there are any  
22 questions.

23 Thank you very much.

24 The last item, as I mentioned before, the  
25 report of the Photocopy Committee, will be delivered

tomorrow.

Will the members of that Committee stay here  
after we adjourn?

We will now recess until 10:00 o'clock  
tomorrow morning.

(Whereupon, the meeting was adjourned until  
10:00 a.m., February 17, 1978.)

oOo

4 1  
2 (Whereupon, it being February 17,  
3 1978, the meeting of Commissioners convened  
4 at 10:00 o'clock A.M., Stanley H. Fuld  
5 presiding as Chairman.)

6 CHAIRMAN FULD: I call the meeting  
7 to order.

8 We plan today to consider the  
9 reports of the Subcommittees on the various  
10 subjects we have examined.

11 The first item will be the report  
12 on the Photocopy Subcommittee. Following  
13 that there will be a discussion amongst  
14 the Commission.

15 VICE CHAIRMAN NIMMER: At our last  
16 meeting, the Commissioners received copies of  
17 the earlier part of the proposed Photocopy  
18 Subcommittee Report and now you have been given  
19 later parts, specifically those entitled  
20 "A possible nonprofit periodical copying  
21 center and related economics of publications  
22 in libraries," and "The impact of photocopying  
23 royalty payments."

24 I think I need not go into the  
25 substance of those. You can read them for

1  
2 yourselves or you may have done so already.  
3 They are descriptive rather than instrumental,  
4 as such, but we think that they carry a good  
5 deal of useful information in them and can  
6 be a valuable contribution made by CONTU in  
7 this area.

8           There is, in addition, a document  
9 that the rest of the Commissioners do not have  
10 as of this time. It is a memorandum addressed  
11 to the Photocopy Subcommittee from me written  
12 by Jeff Squires in consultation with me,  
13 most of which has also been adopted by the  
14 Subcommittee to be included in our report.

15           If I can, in very broad strokes,  
16 suggest to you what is contained therein: The  
17 first section of that report explains why,  
18 in our view, it is not appropriate for the  
19 Commission as of now to recommend legislation  
20 for -- any immediate legislation -- in the  
21 area of photocopy. What, in essence, is the  
22 point is that we feel it is premature to con-  
23 clude either that legislation is or is not  
24 needed in that we are just beginning the era  
25 of the Copyright Act of 1976. We think there

1  
2 should be an opportunity to see how that  
3 works -- how the parties involved are able  
4 to accommodate one with another and, in  
5 general, to see what the status of machinery  
6 production or photocopying, as it may loosely  
7 be described -- how that is going to be working  
8 out under the new copyright laws, specifically  
9 Sections 107 and 108.

10 We do think that it is not  
11 advisable to recommend any immediate  
12 legislation, with one qualification. I am  
13 going to get to that in a moment.

14 We then go on to say that we  
15 think that in the five-year review to be  
16 made by the Register, as required under the  
17 new Copyright Act -- the five-year review of  
18 the status of the photocopying -- we think  
19 that the Register properly should and may  
20 look at the entire field of photocopy and not  
21 just the narrow area encompassed by Section  
22 106, and we suggest a number of factors that  
23 the Register should look at in that connection.

24 We suggest criteria by which  
25 the Register may determine whether or not there

7  
1  
2 is a satisfactory accommodation of the  
3 respective interests of the authors and  
4 publishers, the libraries, the users, and  
5 indeed, the public at large. I refer to  
6 specific legislation. We have recommended,  
7 although we think for reasons indicated, we  
8 think generally it is not advisable now to  
9 recommend legislation. There is one area in  
10 which we think it is advisable and that has  
11 to do with what sometimes is referred to as  
12 "the photocopy mills" or "for profit photo-  
13 copy enterprises," but I think, more broadly,  
14 it can be defined as any photocopying that  
15 does not qualify for a Section 108 exemption.

16 With respect to that kind of  
17 photocopy, we suggest legislation that  
18 would involve five points:

19 The first point would be that any  
20 enterprise involved in this type of photo-  
21 copying -- I am using "photocopying" in a  
22 very broad, loose sense, not in a technical  
23 sense, to include all machinery productions.  
24 We think, with respect to all such enterprises  
25 that do not qualify for a Section 108 exemption

8 1  
2 the first point of the legislation which  
3 we recommend to Congress would be that such  
4 enterprises be required to post a sign that  
5 can be seen by those who are using these  
6 facilities and that sign would specify that --

7 we do not have the  
8 precise language yet so perhaps I should not  
9 read it -- but what we are suggesting is that  
10 a warning be given that those who request such  
11 photocopying may be involved in copyright  
12 infringement.

13 I want to hasten to add that  
14 this warning that we have in mind is a warning  
15 that is not just in very general terms such  
16 as one sees such as will now be required and  
17 to some extent has existed on photocopy  
18 machines in the past.

19 It really tells the user very  
20 little other than maybe there are going to be  
21 copyright infringements. But who knows what  
22 constitutes a copyright infringement and  
23 what does not? We have in mind something  
24 more specific setting forth specific examples  
25 of photocopying that we think everyone would

9 1  
2 agree is beyond the limits of fair use, and  
3 making clear that that kind of photocopying  
4 would constitute infringement while, at the  
5 same time, make clear that it does not  
6 necessarily follow that something less than that  
7 would be fair to use.

8               Nevertheless, being very specific  
9 as to some types of copying that clearly,  
10 in almost all cases, would be beyond any  
11 definition of fair use.

12               I do not know that I want to be  
13 more specific at this point because we have  
14 not worked out the specific language, although  
15 we have some specific language in mind. That  
16 is the objective of what we want to say.

17               Second point of the legislation  
18 would be to indicate -- to make clear -- to  
19 those who are required to post such a sign  
20 that the mere fact that they do post such a  
21 sign does not exempt them from liability  
22 for           any infringing acts that they may  
23 perform at the request of users.

24               In other words, we want to  
25 differentiate this from the provision in



10 1  
2 Section 108 where libraries, in connection  
3 with unsupervised machines, are exempted  
4 from liability as long as they do post a  
5 sign.

6 We do not intend this result to  
7 occur here. Even if the enterprise does post  
8 such a sign, they are not exempted from  
9 liability if they, in fact, engage in repro-  
10 duction that is beyond what is permitted by  
11 fair use.

12 The third point of the legislation  
13 would be to make clear that -- because one of  
14 the factors involved in determining fair use  
15 is whether or not the act is being done for  
16 profit or not, because that is a factor,  
17 although not the only factor, in determining  
18 fair use -- we want to make clear that  
19 although a user who requests reproduction  
20 and does so for his own private nonprofit use,  
21 may be entitled to a fair use claim with  
22 respect to a given reproduction, it does not  
23 necessarily follow that the for-profit  
24 enterprise that is doing this on behalf of the  
25 user has the user's exemption and may claim,

1  
2 by virtue of the user's exemption.

3 It is possible that in some cir-  
4 cumstances the enterprise may incur copyright  
5 liability even though for that same transaction  
6 the user on whose behalf the enterprise is  
7 doing this may be entitled to a fair use  
8 exemption.

9 CHAIRMAN FULD: I do not follow  
10 that. How can that be?

11 VICE CHAIRMAN NIMMER: Because it  
12 is not by virtue of the agency relationship  
13 per se that the enterprise is exempted or  
14 is liable or exempted, but rather, one has to  
15 look to the separate activity of the user and  
16 the enterprise that is engaged in this.

17 One is acting for profit, the  
18 other is not.

19 CHAIRMAN FULD: Won't the protection  
20 of the customer go down to benefit the mill?

21 VICE CHAIRMAN NIMMER: Our point  
22 is that it would not necessarily, Judge. I  
23 do not want to make this a blanket statement to  
24 say that the copying mill is always liable  
25 notwithstanding the immunity of the user.  
No. All we are trying to say is that the

1  
2 reverse proposition is not necessarily tried  
3 that simply. Because the user is exempt,  
4 it does not necessarily follow that the enter-  
5 prise that is engaged in a for profit operation  
6 is likewise exempt.

7 The difference being that there is  
8 profit involved in the --

9 COMMISSIONER LACY: University  
10 Microfilms, for example, has considered that  
11 it should obtain the permission of the  
12 proprietor and obtain a royalty on every copy  
13 it makes for everybody that orders even though  
14 that person himself might be getting a single  
15 copy of the work.

16 Since they set themselves up in  
17 the business of copying, they feel they,  
18 themselves, should require the permission of  
19 a proprietor on occasion, I think.

20 COMMISSIONER PERLE: YOU put up  
21 a sign which says "Go across the street to  
22 the public library which is not for profit."

23 VICE CHAIRMAN NIMMER: Well, this  
24 is the difference. Yes. It is a distinct  
25 difference.

1  
2 CHAIRMAN FULD: I have difficulty  
3 with that concept -- the unimmunity point,  
4 not of the other.

5 VICE CHAIRMAN NIMMER: Fair enough.  
6 At any rate, that is our recommendation for  
7 specific legislation. Beyond that, I should  
8 report to you that there was a proposal for  
9 some further recommendation of legislation which  
10 the Committee -- the Subcommittee -- rejected.  
11 I propose something along the following lines:

12 That although we recommend nothing --  
13 we recommend no immediate legislation -- on the  
14 other hand, I suggested that we should  
15 recommend now that Congress adopt legislation  
16 in the future after the five-year period has  
17 elapsed on condition that the review -- the  
18 five-year review -- to be made by the Register  
19 brings forth a conclusion from the Register  
20 that there has not been a proper accommodation  
21 of the interests involved during that five-  
22 year period, subject to given criteria, that  
23 we suggest the Register should look at.

24 If, at the end of that time, it  
25 appears that authors' and publishers' interests

1  
2 are not being adequately protected by virtue  
3 of the arrangement or it appears that the  
4 libraries and other users are unable to obtain  
5 satisfactory access to the materials, given  
6 the CCC licensing system and other devices,  
7 if in either of those contingencies the system  
8 is not working, then I suggest that Congress  
9 at that time should act and I suggest that we  
10 recommend now what Congress should do then in  
11 the event and on condition that at the five-  
12 year review it appears that there is not a  
13 satisfactory accommodation. The suggestion  
14 as to what they should do is a compulsory  
15 license to be adopted then but only on  
16 condition that there has not been a satisfactory  
17 accommodation.

18 I think I need not go into the  
19 details of that proposal since it was rejected,  
20 but I think you should be aware of it. I  
21 think we will make the document available to you  
22 that will more specifically spell out the  
23 proposal.

24 Those, I think, are the main outlines  
25 of our report. I call upon Bob Frase, our

15 1  
2 staff member who has been primarily responsible,  
3 if you would like to supplement that.

4 MR. ROBERT FRASE: There have been  
5 discussions and numbers mentioned to the  
6 Register of things to be considered, data  
7 to collect in preparation for the five-year  
8 report.

9 Also, there is a section which  
10 would make some general recommendations--you  
11 might call them gratuitous recommendations --  
12 to interested parties.

13 One deals with discussion of a  
14 proposed National Periodical Center and its  
15 relationship to the copyright.

16 Another recommends to publishers  
17 that they make quite clear, especially the  
18 periodical publishers, their policy on copying,  
19 that if they want to be more generous than  
20 the law requires, that they clearly state  
21 in each issue what their policy is for the  
22 guidance of people who may want a copy.

23 Thirdly, a suggestion that the  
24 possibility of putting copyright data in the  
25 data banks of bibliographic information, which

1  
16 2 are being widely developed now, so that persons  
3 can get from a terminal the copyright status  
4 of periodicals at the time they are considering  
5 ordering a copy or making a copy for a customer.

6 VICE CHAIRMAN NIMMER: I think  
7 the floor is open for questions or discussion.

8 COMMISSIONER LACY: I would like  
9 to, I think, clarify what may have been a mis-  
10 understanding or at least I may have mis-  
11 understood, but I think, actually, just a  
12 clarification of one point.

13 You spoke of the proposed  
14 recommendations as to a notice as being  
15 applicable to any place where copying was done  
16 that was not benefiting by the exemption of  
17 Section 108, and that was a sort of shorthand  
18 we used in the Committee discussions.

19 In fact, to qualify for the benefit  
20 of Section 108, there are two or three  
21 different criteria that have to be met:

22 One is that the copying not be  
23 done to make a profit on the copying itself  
24 even though the organization might be for  
25 profit, and another that the collections of

1  
2 the organization be available not only to  
3 the employees and staff of the institution  
4 but to other qualified researchers.

5 Now, my impression is we were  
6 really talking only about those people that were  
7 excluded because they did photocopying to make  
8 money out of photocopying. There might be  
9 many institutions -- the library of a  
10 corporation; for example -- that does not do  
11 photocopying for profit but does not permit  
12 outsiders to use its library and hence does not  
13 benefit from 108 or, for example, the Harvard  
14 University Library conceivably could be held  
15 as not qualifying under 108 because of the  
16 highly restrictive conditions of access to  
17 its collections to Harvard students and  
18 faculty.

19 We would not, I take it, propose  
20 that this notice appear in any institutions  
21 such as a special library or research library  
22 merely because of the exclusion of outsiders  
23 from its collection, but it would be only  
24 in those places, commercial establishments,  
25 that undertook photocopying to make money

88



1  
2 from photocopying.

3 VICE CHAIRMAN NIMMER: I am not  
4 sure of the answer to that question. We did  
5 not explicitly discuss that.

6 COMMISSIONER LACY: I would not  
7 have voted for it except under that under-  
8 standing.

9 CHAIRMAN FULD: May I interpret,  
10 not with respect to this, but I understand the  
11 report of the Subcommittee will be prepared  
12 and circulated and that at the April meeting  
13 we will hear testimony as to the matters  
14 discussed. Perhaps at the April or sub-  
15 sequent meeting the full Commission will  
16 consider and vote.

17 VICE CHAIRMAN NIMMER: Well, yes,  
18 Judge. You reminded me of a point I should  
19 have made explicit and that is because of the  
20 time constraints on our scheduling and on the  
21 life of this Commission, in order to obtain  
22 comments from members of the public on our  
23 Photocopy Subcommittee Report, we would like  
24 approval of the Commission to release our  
25 proposed report by next March 15th, making

1  
2 it clear, of course, that it is a report  
3 only of the Photocopy Subcommittee and not  
4 of the Commission per se. It necessitates  
5 doing this in advance of submitting to the rest  
6 of the Commission the entire Subcommittee  
7 Report in advance of that March 15th release,  
8 but, of course, as the Judge indicates, there-  
9 after there will be a time when the Commission  
10 will, as such, discuss the report and have an  
11 opportunity to accept, reject, modify, or  
12 otherwise.

13 COMMISSIONER DIX: I think you have  
14 answered my question, Judge. I was going to  
15 ask Mr. Nimmer if he did not think it  
16 advisable, even though the proposed legislation  
17 seems to me relatively innocuous, to seek  
18 testimony from interested parties other than --

19 VICE CHAIRMAN NIMMER: We will  
20 indeed do that.

21 CHAIRMAN FULD: Is there any  
22 other --

23 VICE CHAIRMAN NIMMER: Getting back  
24 to Dan's point: Although I do not have any  
25 strong feelings contrary to what you suggest,

1  
2 I do think, however, that, as a Subcommittee,  
3 we did not --

4 COMMISSIONER LACY: We spoke of  
5 copying mills and I think the whole context  
6 of the conversation was in institutions  
7 carrying on photocopying.

8 VICE CHAIRMAN NIMMER: On the other  
9 hand, it is possible to say the point of this  
10 was to clarify or to add a safeguard to those  
11 who are relying on the fair use of exemptions  
12 from the 108 exemption and, therefore, maybe  
13 it makes sense even as to those institutions  
14 to have such assignment.

15 I do not feel strong<sup>ly</sup> about  
16 that.

17 CHAIRMAN FULD: Does anyone else  
18 wish to address himself to this prior to our  
19 seeing the report in full?

20 (No responses)

21 CHAIRMAN FULD: Apparently not.

22 We will go then to the report  
23 of the Subcommittee on Data Bases.

24 MR. ARTHUR J. LEVINE: The Data  
25 Base Subcommittee Report has now been

1  
2 circulated and discussed by the Commission;  
3 there was discussion at the last Commission  
4 meeting in January. At  
5 this meeting it may be the appropriate time  
6 for the Commission to entertain a motion that  
7 the Data Base Subcommittee Report be adopted  
8 and that the staff begin drafting that portion  
9 of the final report dealing with the Data Base  
10 Subcommittee Report.

11 COMMISSIONER PERLE: Before we  
12 do that, how do you propose that the Commission  
13 approach the portions of the report? Are we  
14 going to do it piecemeal or --

15 CHAIRMAN FULD: Of each Subcommittee  
16 Report do you mean?

17 COMMISSIONER PERLE: Assuming that  
18 we approve this Subcommittee Report, I just  
19 see the possibility, less so here than in some  
20 other areas, of an interface or interaction  
21 between various of the Subcommittee Reports.  
22 I think that any approval that we give at  
23 this time has to be sort of conditional, with  
24 the understanding that, if other Subcommittee  
25 Reports are in some way inconsistent or are

1  
22 2 conclusions with respect to the areas dealt  
3 with by other Subcommittees, we are not  
4 engraved in steel.

5 CHAIRMAN FULD: Somewhat related  
6 to that: If any individual Commissioner has  
7 some objection or question as to any portion  
8 of the report, he is privileged to note that  
9 in a memorandum, I would think.

10 VICE CHAIRMAN NIMMER: Of course.

11 COMMISSIONER MILLER: I think it  
12 would be helpful to note what the current  
13 thinking of the staff is as to the shape and  
14 structure of the report. You talk about  
15 the report as if we have some concept of what  
16 it is.

17 MR. LEVINE: We have a Drafting  
18 Committee and I have not discussed this  
19 with the Chairman of the Drafting Committee,  
20 but, as I envision the final report, it will  
21 be divided into two sections:

22 One on photocopying and one on  
23 computer issues. The computer issues will,  
24 of necessity, interrelate all of the three  
25 computer issues that we have delineated --

1  
2 new works, software and data base -- of  
3 course, as we know, we now only have the two  
4 reports of the Data Base Subcommittee and the  
5 Software Subcommittee. The New Works Sub-  
6 committee we hope will complete its report  
7 within the, I would think, the next month. What  
8 we are anxious to have at this point is a  
9 reading from the Commission as to the substance  
10 of the two Commission reports as to what has  
11 been recommended by those two subcommittees  
12 as the will of the full Commission. That,  
13 at least, will enable us to begin sifting  
14 from the material that we have collected, from  
15 comments we have had, from the testimony that  
16 we have had at hearings, the material we think  
17 might go into the final report substantiating  
18 those Commission decisions.

19 COMMISSIONER MILLER: You envision  
20 a Subcommittee Report will provide the  
21 substantive base for the final report.

22 MR. LEVINE: Yes.

23 COMMISSIONER MILLER: Do you  
24 envision appendices and, if so, what?

25 MR. LEVINE: Yes, I do envision

1  
2 appendices. I would imagine that among the  
3 appendices would be, for example, the  
4 report of our contract, the Harbridge House  
5 Report, and that is as an example.

6 COMMISSIONER MILLER: Do you  
7 envision a free-standing document with back-  
8 ground or just a technical report to Congress?

9 MR. LEVINE: I suddenly feel as  
10 though I am a student at Harvard Law School.  
11 I am sorry. Free-standing document.

12 COMMISSIONER MILLER: You will get  
13 yours. I mean a document that might even  
14 be, in effect, a book that is designed to  
15 educate a wider range of people other than  
16 the Congress.

17 MR. LEVINE: Certainly. I  
18 hope so. I see that. I see that certainly  
19 as the purpose of the Commission report.

20 CHAIRMAN FULD: Any other general  
21 statements before we --

22 MR. LEVINE: Excuse me. It has been  
23 suggested that the report itself be very short  
24 and that the bulk of the report be in the  
25 appendices. It is not clear yet until we

1  
25 2 really get into the drafting of it that we  
3 can do that but --

4 COMMISSIONER PERLE: I think that  
5 what that really means, Arthur, is that you  
6 have conclusions substantiated by discussion  
7 supported by appendices.

8 MR. LEVINE: Yes.

9 CHAIRMAN FULD: Does anyone else  
10 want to ask questions or make any comment?

11 (No responses)

12 CHAIRMAN FULD: Which brings us  
13 to the third Subcommittee Report on Software.

14 COMMISSIONER LACY: Mr. Chairman,  
15 have we taken formal action on the --

16 CHAIRMAN FULD: I thought there was  
17 no objection.

18 VICE CHAIRMAN NIMMER: I think it  
19 probably should be more explicit.

20 COMMISSIONER LACY: I guess I am the  
21 only member of it present. I move the  
22 adoption of the substance of the Data Base  
23 Subcommittee Report as a conclusion of the  
24 Commission and as the basis for the Commission's  
25 final report on the subject.



1  
2 VICE CHAIRMAN NIMMER: I second  
3 it.

4 CHAIRMAN FULD: Is there anything  
5 to be said in any discussion on that?

6 COMMISSIONER HERSEY: I would like  
7 to simply make a brief statement. I intend  
8 to vote for this report but I would like to  
9 make it a matter of record that I have serious  
10 misgivings about one aspect of the Data Base  
11 in relation to copyright, and that is its  
12 dynamic quality. This is a concern which I  
13 expressed in the first paper I gave the  
14 Commission on my general doubts in the area  
15 of computers, and I would simply like to make  
16 that as a reservation on my vote.

17 CHAIRMAN FULD: Is there any  
18 other discussion or objection?

19 (No responses)

20 CHAIRMAN FULD: There being none,  
21 all in favor?

22 (Chorus of "Ayes.")

23 CHAIRMAN FULD: The motion is  
24 carried.

25 MR. LEVINE: May I just for the

1  
27 2 record indicate that I had spoken to two of  
3 the absent Commissioners who indicated that  
4 they would, if they were present, vote in favor  
5 of the Data Base Subcommittee Report. Mr.  
6 Wedgeworth suggested that there be a five-  
7 year review of what we recommend, and I put  
8 that on the record.

9 CHAIRMAN FULD: Which brings us,  
10 I say again, to the Report of the Subcommittee  
11 on Software and Programs.

12 MR. JOSEPH TAPHORN: Judge Fuld,  
13 will this Data Base Report be available to  
14 the public at an early date before the final  
15 Commission report?

16 CHAIRMAN FULD: We think so.

17 MR. LEVINE: Yes. It has already  
18 been made public. It is the document that has  
19 been circulated for comment.

20 MR. TAPHORN: And the preliminary  
21 report?

22 MR. LEVINE: Yes.

23 COMMISSIONER PERLE: Would it be  
24 appropriate to put it in the Federal Register?

25 MR. LEVINE: We can certainly do

1  
28 2 that.

3 CHAIRMAN FULD: We talk now of the  
4 Subcommittee Report.

5 MR. LEVINE: Yes, the Subcommittee.

6 COMMISSIONER PERLE: Judge, I am  
7 wondering, for the record, if there should be  
8 a chance for those who -- we merely said  
9 "All in favor." I think probably we ought to  
10 know if there is anybody who is not in favor,  
11 just for the record.

12 CHAIRMAN FULD: I gather there was  
13 none. Is there anyone opposed to the Data  
14 Subcommittee Report except for the reservation  
15 by Mr. Hersey?

16 (No responses)

17 CHAIRMAN FULD: Which brings us, I  
18 say again, to the Subcommittee Report on  
19 Software and Programs.

20 We have all had a chance to read  
21 it. It has caused me more doubt and questions  
22 than the other subjects.

23 Gabe, will you make the motion?

24 COMMISSIONER PERLE: I move that  
25 the Report of the Software Committee -- the

1  
2 Revised Report of the Software Committee --  
3 be adopted by this Commission.

4 COMMISSIONER LACY: I second it.

5 CHAIRMAN FULD: There will be  
6 discussion.

7 COMMISSIONER HERSEY: Mr. Chairman,  
8 I would like to let my draft dissent stand  
9 on its own but I think that it would be  
10 valuable to have some discussion of one point  
11 which has appeared for the first time in the  
12 Subcommittee Report and which we did not,  
13 therefore, have a chance to discuss before:  
14 That is the issue in their proposed new version  
15 of Section 117 that copyright of programs  
16 should extend not only to copies as they are  
17 now describing the mechanical phase of programs,  
18 but also to adaptations.

19 This morning's New York Times  
20 gives an account of two adaptations of novels,  
21 a new translation of Bassani's Garden of Finzi  
22 Continis and a new version that the  
23 author has written, John Fowles, of The Magus.

24 It would obviously not be the case  
25 that the original copyright could obtain for

1  
2 these adaptations.

3 Let me carry that illustration  
4 quite a bit farther with a kind of parable  
5 about a public history which is imaginary  
6 but which I think does suggest that there is  
7 an essential problem here.

8 I write a novel, it is a thriller,  
9 it has an Albanian spy in it. The Reader's  
10 Digest Condensed Book Club takes it and  
11 publishes about fifty percent of it. A French  
12 publisher translates that version of the novel  
13 into French but because of some delicate  
14 negotiations the French Government is  
15 carrying on with the Chinese, makes it em-  
16 barrassing to have an Albanian spy, so he is  
17 changed to a Cuban spy, requiring revisions  
18 extensively through the novel to make that  
19 possible.

20 An Italian publisher does a  
21 translation of the French novel, but because  
22 some Euro-Communists are now in the Italian  
23 Government, it is embarrassing to have a  
24 Cuban spy, so he makes it an American spy,  
25 and that requires further changes.

1  
2 A British publisher then has the  
3 novel translated into English and makes it an  
4 English spy and has the brilliant editorial  
5 idea of changing the name of the author from  
6 Hersey to LeCarre. It is now a huge success  
7 and Penquin Books, which functions both in  
8 England and America, now decides to do an  
9 American edition of the novel.

10 This is an absurd story but I  
11 suggest that the notion that the original  
12 copyright should maintain for these versions,  
13 even taking into account the fact that things  
14 do not actually work this way, would be seen  
15 as absurd. The difficulty with programs  
16 goes deeper than that. The parable that I  
17 have given is from the testimony we had from  
18 the MIT people in Cambridge suggesting that  
19 there are very complicated adaptations of  
20 computer programs.

21 Examples that were given us  
22 by Professor Licklider were of the kind  
23 that you go from one language level to another  
24 and back again.

25 You may induce a program into one

1  
2 kind of hardware and then a more sophisticated  
3 version of that hardware comes along and the  
4 program is adapted for that with new capabilities,  
5 new mechanical functions may be added to a  
6 complex program, a program may become part of  
7 a complicated multiprocessor and operate with  
8 other computers, and all of these different  
9 stages would require adaptations.

10 The reason this is more serious  
11 for computers than for book publications  
12 is that, as Professor Licklider very  
13 expressly pointed out to us, what is kept  
14 through these adaptations is not the motive  
15 expression, not the means of expression, but the  
16 underlying mechanical idea.

17 I think that the looseness of  
18 this language in the proposed Section 117  
19 opens the way for covert protection of the  
20 idea rather than the means of expression, and  
21 that seems to me to be a serious matter.

22 CHAIRMAN FULD: May I ask a very  
23 naive question?

24 Wouldn't each of these adaptations  
25 that you have suggested be an infringement

1  
2 of the original copyright?

3 COMMISSIONER HERSEY: Precisely,  
4 but not in the case of the computer program  
5 as this is proposed by the Software Sub-  
6 committee which explicitly says that  
7 adaptations would not be infringements.

8 COMMISSIONER PERLE: I respectfully  
9 suggest that we together look at the provisos  
10 in 117 with respect to adaptations. It is  
11 on Page 24 of the Report.

12 CHAIRMAN FULD: The Subcommittee  
13 Report.

14 COMMISSIONER PERLE: Adaptations  
15 are permitted here only into very, very narrow,  
16 specific ways.

17 It was the purpose of the Sub-  
18 committee to allow utilization of a program  
19 within one system when that program may have  
20 been written, created with a somewhat different  
21 system in mind.

22 The technology of the present  
23 stage is not a universal one. The technology  
24 probably will never be, from what we have  
25 heard, universal, and therefore, a certain



1  
2 amount of adaptation is necessary in order  
3 to take a given program and allow it to be  
4 used on, let us say, a Honeywell machine  
5 rather than an IBM.

6 CHAIRMAN FULD: This has caused  
7 some concern to John who may not -- perhaps the  
8 language --

9 COMMISSIONER PERLE: I think that  
10 he has not focused, Judge, on the purpose of  
11 this. This is not an adaptation so that the  
12 adapter, in turn, can sell, disseminate,  
13 distribute, reproduce. It is only so that he  
14 can use the rightfully possessed copy of the  
15 program.

16 COMMISSIONER HERSEY: That is  
17 precisely the basis for my concern that the  
18 test is not one of expression. The test  
19 is whether it is functional, whether it can  
20 be used, and the test, therefore, is whether the  
21 underlying mechanical idea is appropriate or  
22 not, not the means of expression.

23 I think that is the real basis of  
24 my concern about this.

25 CHAIRMAN FULD: Arthur, do you

1  
35 2 have anything to contribute to this?

3 COMMISSIONER MILLER: At this  
4 particular point? I am still trying to  
5 understand John's objection.

6 CHAIRMAN FULD: I am, too.

7 MR. MICHAEL S. KEPLINGER: May I  
8 offer a small comment?

9 CHAIRMAN FULD: Please.

10 MR. KEPLINGER: Keplinger is the  
11 name. When this  
12 provision was rewritten into the Subcommittee  
13 Report, the intent was to permit small trivial  
14 changes to be made in the computer program with-  
15 out a question of infringement arising.  
16 Changes that would not go to the mode of  
17 expression adopted by the programmer in  
18 setting forth the set of instructions but  
19 rather only those changes in the program that  
20 would enable the program to --

21 CHAIRMAN FULD: Adopt to a  
22 different machine.

23 MR. KEPLINGER: Be used in a  
24 different environment.

25 COMMISSIONER HERSEY: But in the

1  
2 real world of computers, as it was explained  
3 to us by Profssor Licklider, this is a  
4 dynamic process and while changes of the  
5 kind that you are describing are being made,  
6 others also are made,<sup>so</sup> that the process of  
7 adaptation is fluid and dynamic. Are  
8 you proposing that at every stage at which  
9 a small functional change is introduced into  
10 a program it should be recopyrighted?

11 COMMISSIONER PERLE: It has  
12 nothing to do with copyright, John.

13 COMMISSIONER HERSEY: Of course  
14 it has.

15 COMMISSIONER PERLE: The section  
16 says it is not an infringement. That does  
17 not mean that there is an economic right given  
18 to the person making the adaptation. You are  
19 saying that the person who is making the  
20 adaptation has not signed.

21 Now, let us look at it from a  
22 functional standpoint. Who is hurt? Whose  
23 interests are adversely affected? What  
24 economic or sociological factors are there that  
25 bear on this specific process that are un-

1  
2 desirable from a governmental, social or  
3 economic standpoint?

4 I think the answer clearly is none.  
5 I cannot think of any reason why, other than  
6 mere and pure abstract thinking based upon  
7 a premise other than mine. I cannot think of  
8 any reason for objecting to this because no  
9 one's interests are adversely affected.

10 COMMISSIONER HERSEY: If it is  
11 open to a user to adapt a program, he might  
12 very well adapt a program in a way in which  
13 the proprietor did not want it to be adapted.  
14 Might he?

15 COMMISSIONER PERLE: John, let me  
16 take an analogy.

17 COMMISSIONER HERSEY: Would that  
18 not be an infringement?

19 COMMISSIONER PERLE: No, no, it  
20 would not, nor would it be any more of an  
21 infringement than if I took a book which was  
22 written by John LeCarre and, for my own  
23 amusement, made the principal spy not an  
24 Englishman but an Albanian.

25 I did nothing other than keep it

1  
38 2 in my sole possession.

3 COMMISSIONER HERSEY: But --  
4 excuse me. It is quite possible that the  
5 user making an adaptation of the program might  
6 use the program for commercial purposes.

7 COMMISSIONER PERLE: That is  
8 exactly the reason that the proprietor wrote  
9 the program, sold the program, and disseminated  
10 it: So that somebody can use it. All this  
11 section seeks to do is to allow the person  
12 who wants to buy and use, lawfully, the  
13 program, to use and use, lawfully, the program.

14 CHAIRMAN FULD: No changes of  
15 substance.

16 COMMISSIONER PERLE: No changes of  
17 substance whatsoever.

18 COMMISSIONER HERSEY: That is not  
19 made clear. You set no limit on adaptation  
20 and it seems to me quite possible that there  
21 might be adaptations of sorts which the  
22 proprietor would not approve.

23 COMMISSIONER PERLE: I do not know  
24 how the language could be any narrower, more  
25 focused, or more specific.

1  
2 CHAIRMAN FULD: I think

3 "adaptations" is probably different from  
4 "modification." It is probably a word of ours  
5 that suggests doing those things which are  
6 necessary to get in a particular machine.

7 VICE CHAIRMAN NIMMER: Adaptation,  
8 at the very least, means more is copied than  
9 merely the idea. Sufficient is copied so that  
10 it would be an infringement unless it is  
11 licensed or permitted by the statute.

12 I would say that is an adaptation  
13 by definition, or a derivative work, which is  
14 the same thing.

15 COMMISSIONER PERLE: If you were  
16 translating the language of the program, for  
17 example, from one computer language to another,  
18 that would be an infringement absent this  
19 section, and there are ways in which you can  
20 take one program -- right? I mean the  
21 technical end of it you are on, as I under-  
22 stand it. You can take the program and  
23 in order to fit the hardware that you have,  
24 in order to make that program work in your  
25 hardware, you translate it, in a sense.

1  
2 You adapt it. You are doing precisely what  
3 the proprietor wants you to do. He wants  
4 you to buy it and use it, and all we want  
5 to do is have a provision which says that  
6 when somebody buys it and uses it, he is not  
7 committing a crime.

8 COMMISSIONER HERSEY: You were  
9 absent at the Cambridge meeting at which  
10 Professor Licklider made the point explicitly  
11 that translation from one language level to  
12 another and back again and up and down in a  
13 complex program did not preserve the means  
14 of expression of the program but simply  
15 preserved the mechanical idea.

16 COMMISSIONER PERLE: I read that  
17 and I think the testimony of one man, expressed  
18 as it was there on paper, is not truly  
19 determinative of the whole story, nor do  
20 I think that it bears on this particular  
21 point because if you read the fact that it is  
22 used in no other manner, it means that a  
23 second party cannot come along and take that  
24 adaptation and make a further adaptation on  
25 it. It is only the lawful possessor of the

1  
2 original and, therefore, that the dynamics  
3 and the fluidity change.

4 COMMISSIONER HERSEY: I think  
5 this is a serious issue because it seems to  
6 me it opens the way in the world of computers  
7 as we had them described to us at Cambridge.  
8 It opens the way to much more than what is  
9 intended and I think it may be a serious matter.

10 COMMISSIONER PERLE: John, how does  
11 it open anything if no one other than the  
12 lawful possessor can use the adaptation?  
13 What does it change?

14 COMMISSIONER HERSEY: As I said  
15 earlier, if there is no limit on the  
16 adaptations, he may adapt the program in a  
17 way that the original proprietor did not want  
18 the program to be adapted.

19 He may add new functions. He may,  
20 going from a less sophisticated to a more  
21 sophisticated kind of computer, enable the  
22 program to do things which the proprietor  
23 did not want it to do, and it seems to me  
24 that this is too loose. It opens the way to  
25 serious difficulty.

112



1  
42 2 On an abstract level, if you will, because  
3 I think that there is an issue here of the  
4 meaning of copyright, this does open the way  
5 to covert protection of the idea rather than  
6 the means of expression, and that is a  
7 fundamental objection.

8 CHAIRMAN FULD: That certainly  
9 is not what is intended. That is not the --

10 COMMISSIONER MILLER: Let us put  
11 some context on that. Let us suppose that you  
12 have got a computer program being commercially  
13 marketed to run a payroll system and a company  
14 buys that program and uses it in its machine  
15 for payroll control. As a result of new  
16 legislation -- state, federal, local -- there are  
17 new taxes that are to be imposed and a new  
18 withholding scheme is put into effect.

19 The purchaser of that program then  
20 "adapts" the purchase program of which he is  
21 a rightful possessor, first, to recalibrate  
22 the withholding scales, second, to add  
23 additional functions so that the machine makes  
24 the necessary computations for the new taxes.

25 Is he an infringer, Gabe?

1  
2 COMMISSIONER PERLE: Under this  
3 section, yes, because that adaptation was  
4 not made as an essential step in the utilization  
5 of the computer program in conjunction with a  
6 machine and it is used in no other manner.

7 In this instance, it is used in  
8 another manner. That is not the sort of  
9 adaptation that this language covers. The  
10 language is, in fact, now -- you know, I  
11 respectfully suggest this is not an issue  
12 at all. I think this is just a question of  
13 understanding the language of the provision  
14 as it is written.

15 MR. JEFFREY L. SQUIRES: My name  
16 is Jeffrey Squires and I think it should be at  
17 least pointed out that computer programs are  
18 commonly sold under contractual restrictions  
19 today precluding the use or adaptation of a  
20 program from one machine or another. That is,  
21 as I understand it, widespread industry  
22 practice and might bear on these considerations  
23 because it does create an understanding of  
24 what the intent of a program manufacturer  
25 and distributor is.

1  
2 COMMISSIONER PERLE: This language,  
3 Jeff, would not preclude a contractual  
4 limitation on any lawful possessor. Even as  
5 in Mr. Hersey's prior case, when he as author,  
6 licenses the publisher, he says a foreign  
7 publisher -- he says or he may say you may not  
8 make any changes in my work unless and until  
9 it has been approved by me.

10 So that you cannot make that sort  
11 of adaptation in a literary work and  
12 similarly cannot do it contractually if the  
13 contract so provides.

14 COMMISSIONER MILLER: You know,  
15 Gabe, there is a slight ambiguity in the  
16 word "adaptation" if you are trying to make  
17 it stretch to embrace both revision of  
18 instructions within the existing program and the  
19 addition of new sets of instructions to make  
20 the overall program perform additional  
21 functions.

22 COMMISSIONER PERLE: You think  
23 there ought to be a limitation?

24 COMMISSIONER MILLER: I am not  
25 at all clear that the owner of a copyright

1  
2 acquisition or development of a second  
3 program to do six through nine.

4 VICE CHAIRMAN NIMMER: But 117  
5 is worded in the negative. It does not  
6 make it an infringement, does it, to add  
7 these additional functions? It simply says  
8 it is not an infr<sup>n</sup>gement to make an  
9 adaptation --

10 COMMISSIONER MILLER: All I am  
11 suggesting is that the word "adaptation"  
12 might require a little brush work in terms of  
13 talking about the integrity of the  
14 existing program.

15 VICE CHAIRMAN NIMMER: You are  
16 raising basic moral rights questions which  
17 go beyond computers and which are not really  
18 clear in the existing law of copyright --  
19 whether making an adaptation is a violation  
20 of the -- making an adaptation which adds  
21 new points is a violation of the adaptation  
22 right.

23 COMMISSIONER MILLER: Well, I am  
24 talking about the difference between licensing  
25 the right to perform Romeo and Juliet and

1  
2 licensing the right to make a musical  
3 comedy out of Romeo and Juliet.

4 COMMISSIONER PERLE: You are  
5 talking about a derivative work in copyright  
6 terms?

7 COMMISSIONER HERSEY: Yes, and  
8 this is the term you first used to cover this  
9 difficulty in your first draft. This is  
10 really why I come to this because it seems  
11 to me that each of your versions has had to  
12 come to a device of some kind which would  
13 cover basic difficulty in the protection of  
14 the means of expression.

15 COMMISSIONER PERLE: Let me ask you  
16 this, Arthur and John:

17 Would you be happy if it said that  
18 such new copyright adaptation is created  
19 solely in order to permit the utilization --

20 CHAIRMAN FULD: Of the program?

21 COMMISSIONER PERLE: Of the  
22 program -- of the computer program -- in  
23 conjunction with a machine?

24 COMMISSIONER HERSEY: It would  
25 not please me but Arthur would have a different

1  
2 opinion. I think the fundamental problem  
3 is --

4 COMMISSIONER PERLE: That sort  
5 of line. I do not mean it literally.

6 COMMISSIONER LACY: I do under-  
7 stand that, Gabe. An analogy of what we  
8 are talking about would be a rightful owner of  
9 an eight millimeter film which he has been  
10 using in an eight millimeter projection

11 purchases a sixteen millimeter projector and  
12 he wants to be able to make himself a new  
13 print of the film in the sixteen millimeter  
14 which would fit his new projector, not  
15 changing the substance of the content but simply  
16 making it adaptable to the new piece of equip-  
17 ment. Is that essential to what we are  
18 talking about?

19 COMMISSIONER PERLE: I hate  
20 analogies. It is the sort of thing I would  
21 have to put some limitations on. I would  
22 have to say that the eight millimeter would  
23 not be used at all.

24 COMMISSIONER LACY: Well, yes.

25 COMMISSIONER HERSEY: What if he

1  
49 2 cuts two or three frames out because the  
3 projector he is using cannot handle as many  
4 frames as there are in the original? This is --

5 COMMISSIONER PERLE: He has the  
6 right to do that now provided he is not doing  
7 it as a performance--for a public performance.

8 COMMISSIONER HERSEY: We are  
9 assuming that it is commercial.

10 VICE CHAIRMAN NIMMER: Gabe,  
11 going to the point that the person did do this  
12 only for his own machine but cannot market  
13 it. Is that what you are saying?

14 COMMISSIONER PERLE: Yes. Market  
15 the program.

16 VICE CHAIRMAN NIMMER: Isn't there  
17 some ambiguity on that by virtue of the last  
18 unnumbered paragraph of 117? "Any copies  
19 prepared in accordance with provisions of  
20 this section may be leased, sold,"etcetera.  
21 Couldn't those copies be read as concluding  
22 this adaptation and so go beyond the  
23 limitation of your suggestion?

24 COMMISSIONER PERLE: Maybe the  
25 language needs some brushing.

1  
2 COMMISSIONER HERSEY: You see,  
3 I have said this from the very beginning.  
4 The difficulty is that, whatever euphemism  
5 you choose, you are going to come up against  
6 the same problem. The language will be very  
7 hard to find that will --

8 CHAIRMAN FULD: What you feel  
9 was not intent and I think, as I suggested  
10 before, there should be some clarification to  
11 avoid the construction given to it by John.

12 COMMISSIONER HERSEY: It is not a  
13 matter of fear. My basic point is that the  
14 program in its mature stages is a mechanical  
15 device and it is inappropriate to bring to the  
16 considerations of the protection of means of  
17 expression. I think that no matter how  
18 you word the language of this section, you  
19 come up against that difficulty sooner or  
20 later.

21 This is the fundamental issue that  
22 I raise in my dissent. I do not want to  
23 argue this all day but it is, I think,  
24 expressive of my major concern here.

25 MR. EDMUND APPLEBAUM: It is



1  
2 interesting that you have all used the  
3 term "adaptation" but all the professionals  
4 use quite a different term. They always  
5 speak of "program maintenance" when they are  
6 making changes. This is program maintenance  
7 and it is a very full ongoing piece of  
8 activity.

9 COMMISSIONER PERLE: Yes, but  
10 program maintenance is not what was sought  
11 to be covered by this section.

12 MR. APPLEBAUM: That is what your  
13 adaptation is, really: Program maintenance.

14 COMMISSIONER PERLE: No. Program  
15 maintenance is the constant updating of a  
16 program to keep it current. This was designed  
17 to allow the purchaser of the -- or the  
18 lessor -- or the possessor of a program which  
19 had been created by someone else to use it.

20 CHAIRMAN FULD: Isn't that  
21 encompassed by the suggestion that is made --  
22 maintenance?

23 COMMISSIONER PERLE: No.

24 COMMISSIONER HERSEY: It would get  
25 you in much worse trouble.

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CHAIRMAN FULD: I will withdraw  
the suggestion.

COMMISSIONER PERLE: I think  
there are two questions here: One of them  
is that there is an ambiguity in the  
language; the other is a basic rejection of  
the concept of computer protection at all,  
and from that flows all the other things.  
In a sense, I think we have to deal -- we are  
going to have this problem all the way along  
the line where there are two different  
philosophies here that have been expressed,  
I think.

If we can sort of synthesize  
them: One philosophy says computer programs  
are -- they exist -- that they exist and  
have economic value; there is creativity  
in them; they are the writings of an author;  
they are to be protected for valid, good,  
social and economic reasons. The appropriate  
means of protecting them is copyright.

COMMISSIONER HERSEY: I think  
both views go up to that last sentence.

COMMISSIONER PERLE: The other --

1  
2 correct. Let us deal with the last. The  
3 other says that for a whole variety of reasons,  
4 some of which reflect bias or some of which  
5 reflect a basic emotional viewpoint --

6 COMMISSIONER HERSEY: I think you  
7 better let me state my philosophy.

8 COMMISSIONER PERLE: No, I think  
9 that I better state my viewpoint and then you  
10 state yours.

11 COMMISSIONER HERSEY: Okay.

12 COMMISSIONER PERLE: I think  
13 that -- and without any added argument or  
14 anything else -- that this sort of thinking  
15 which under some circumstances does not  
16 communicate in the normal way with human  
17 action, therefore should not be subject to that  
18 sort of protection which traditionally has  
19 protected that which, in one way or another,  
20 in a normal way, communicates with human action.

21 I think that is the core of the  
22 whole thing. I think that from that stem  
23 our differences. Only that. I think that  
24 there are some of us who regard language as a  
25 dynamic and unspoken. Unheard, understood

1  
2 language is just as much language and  
3 communication in a sense as that which we  
4 have come to accept. In the same sense  
5 that a piano roll or a groove in a piece of  
6 wax could not be a writing, how can a  
7 program be a writing? It is, I think.  
8 I think that there are some of us who just are  
9 not going to change our basic approach to this.  
10 I believe and you do not, John, and I think  
11 what is about where we come out. I think what  
12 we have to do with this somewhat emotional  
13 statement on my part is find out specifically  
14 where you, from the standpoint of the objectives  
15 of the purpose of this Commission, feel the  
16 whole Subcommittee Report differs from what  
17 you believe.

18 COMMISSIONER HERSEY: May I back  
19 off and start where you started -- there are  
20 two philosophies -- and say that I would  
21 accept your preamble of the first philosophy  
22 which I take it was yours, all the way up to  
23 the point of saying that copyright is the  
24 appropriate means of protection.

25 I think the copyright is not the

1  
2 appropriate means of protection because the  
3 mature program is a mechanical device and  
4 should not, for constitutional reasons,  
5 be protected by copyright.

6 Everything that flows from that is,  
7 on the one hand, technical argument and,  
8 on the other hand, social argument.

9 COMMISSIONER PERLE: Could you tell  
10 me what a mature program is?

11 COMMISSIONER HERSEY: Yes, by  
12 "mature program" I mean a program which is  
13 capable of being entered into a computer  
14 in order to make it run.

15 COMMISSIONER PERLE: The program  
16 in its final form as it is to be used.

17 COMMISSIONER HERSEY: Capable of  
18 being used.

19 COMMISSIONER MILLER: A deck of  
20 cards, if the machine will respond to a deck  
21 of cards?

22 COMMISSIONER HERSEY: It might  
23 conceivably be.

24 COMMISSIONER MILLER: Or a tape  
25 or a disk.

1  
56 2 COMMISSIONER HERSEY: Or a human  
3 voice, as it may soon be.

4 COMMISSIONER MILLER: At the  
5 point that the program itself becomes  
6 capable of driving a machine --

7 COMMISSIONER HERSEY: No, excuse  
8 me. When it is capable, yes, of driving the  
9 machine, that would be the point.

10 COMMISSIONER MILLER: At that  
11 point, it becomes what? Uncopyrightable?

12 COMMISSIONER HERSEY: Yes.

13 COMMISSIONER MILLER: And all  
14 precursor versions of that same program  
15 remain copyrighted.

16 COMMISSIONER HERSEY: No, not  
17 necessarily, because if the tape and the card  
18 and so on that you were talking about before --  
19 it seems to me to have passed over into that  
20 stage -- would be incapable of operating the  
21 machine.

22 They are simply slipped in the  
23 machine and they run it but the, as I said in this  
24 last version of my report which I would  
25 forgive any Commissioner for not having read

1  
2 since there have been a great deal of  
3 literature on this subject from me and from  
4 others, I make the point that I think that  
5 really expert advice would have to be  
6 consulted to mark the cut-off point. There is  
7 no argument that programs in their written  
8 and natural language phases are copyrightable  
9 and I think that expert advice would be needed  
10 to determine the point at which a computer  
11 program becomes mechanical and ceases being  
12 a writing.

13 COMMISSIONER MILLER: John, I  
14 read your latest dissent or the text of it  
15 with great fascination. I only wish that  
16 my law students could write as persuasive a  
17 legal brief as that.

18 Are you saying that at the point  
19 the program becomes mature reading -- the  
20 word "mature" as meaning capable of driving  
21 a machine -- it is like the mark of Cain and  
22 from that moment on it cannot be protected  
23 no matter what use is made of that mature  
24 program?

25 COMMISSIONER HERSEY: Yes, I think

58 1 the mark of Cain is a loaded way of describing  
2 what I would say. It becomes mechanical and I  
3 think, as I understand it, mechanical devices  
4 are not protectable by copyright.

5 COMMISSIONER MILLER: I understand  
6 that you take this approach because you feel  
7 that copyright protection is designed to protect  
8 expression being transmitted to a human being.

9 COMMISSIONER HERSEY: That is the  
10 fundamental --

11 COMMISSIONER MILLER: There are many  
12 ways that a mature program could be used to  
13 transmit expression to a human being.

14 COMMISSIONER HERSEY: Yes, but  
15 yesterday afternoon's witness, who presumably  
16 was here to make just this point, I think,  
17 proved to be a poor witness because it is  
18 clear that what is transmitted to the human  
19 consciousness is data which is assembled in the  
20 machine and manipulated by programming.

21 The original expression of the program  
22 is not communicated to the human being, it is  
23 communicated to the machine in order to move  
24 data around.

25 COMMISSIONER MILLER: That is one



59 1 possible use of a mature program.

2 Another possible use of a  
3 mature program is by somebody who said I am  
4 told that this reel of tape contains a very  
5 powerful program.

6 I am a computer programmer. I am  
7 a student of computer science. I am a  
8 scientist. I would like to read this program  
9 since I cannot read this tape. I am going to  
10 load it into a machine and simply have it  
11 displayed on the screen and I am going to sit  
12 here and read it the way I would read Hersey  
13 or LaCarre.

14 COMMISSIONER HERSEY: What I would  
15 say there is that it is being transformed  
16 back into the copyrightable stage. Yes. That  
17 is perfectly all right.

18 COMMISSIONER MILLER: Then it is not  
19 true that any use of a mature program is not  
20 an infringement.

21 COMMISSIONER HERSEY: Well, this is  
22 an issue of copying and what the copy is.

23 COMMISSIONER MILLER: It is very  
24 important to me, John -- and I mean this  
25 in all honesty -- it is very important to me

1  
60 2 that I understand exactly the dimension of  
3 your objection.

4 Let us put a greater demeanor on  
5 my reader of the tape. The reader of the tape  
6 says "I think I can put out a cheaper version  
7 of this" or "I think there is a market for  
8 printed copies of this mature version."

9 Would you tolerate the notion that  
10 that person is an infringer even though --

11 COMMISSIONER HERSEY: I would say  
12 that printed copies of a mature version is a con-  
13 tradiction in terms. A mature version is  
14 mechanical and in order to have printed  
15 copies you would have to have it translated  
16 back into --

17 COMMISSIONER MILLER: But it is  
18 mechanical not only to produce work -- the  
19 thing you object to -- but it is mechanical  
20 and is capable of transmitting expression to  
21 a human being just the way a phonograph record  
22 is.

23 COMMISSIONER HERSEY: It may in  
24 rare instances be enabled to be --

25 COMMISSIONER MILLER: I am worried

1  
2 about those rare instances.

3 COMMISSIONER HERSEY: I would  
4 regard it as being a reversible process that  
5 the copyrighted work becomes mechanical, the  
6 mechanical work can be reversed to become  
7 copyrightable.

8 COMMISSIONER PERLE: Just  
9 historically, there was a time when a phono-  
10 graph record was referred to as a part of a  
11 musical instrument. That stopped with a  
12 change in the Copyright Law.

13 So the analogy, if it is an  
14 analogy, to the phonograph record, says that  
15 there has already in the Copyright Law been  
16 protection accorded to that which I --

17 COMMISSIONER HERSEY: I have gone  
18 into considerable detail in the dissent  
19 to try to find out the differences in function  
20 between the phonograph record and the  
21 program in this respect.

22 I recognize that history but there  
23 are significant differences between the  
24 function -- the significant difference is  
25 that the phonograph record produces for the

1  
2 ear of the hearer, the writing of the author.  
3 A program does not produce for the eyes of  
4 the viewer, the writing of the --

5 COMMISSIONER MILLER: John, if  
6 that tape is mounted by my gray user and he  
7 reads it there, that may be fair use.

8 Let us leave that to one side.

9 Then he says there is a market for  
10 this and I am going to photoduplicate, screen  
11 by screen, this program and sell copies in that  
12 format. Also no doubt that that is a use  
13 that is communicating to a human being and  
14 should be an infringement. Right?

15 COMMISSIONER HERSEY: You are  
16 talking about taking pictures of what the  
17 cathode ray tube shows.

18 COMMISSIONER MILLER: Or hitting  
19 a print key. Right? He sells copies  
20 in that form. That is an infringement.

21 Suppose he puts that tape in, reads  
22 the program, and says "This is a winner."  
23 This dumb bunny who owns this thing does not  
24 understand the commercial value of it and he  
25 simply replicates the tape and sells copies of

1  
2 the tape. This is mature program, under  
3 your definition. Is he an infringer?

4 COMMISSIONER HERSEY: I suppose  
5 he is.

6 COMMISSIONER MILLER: Only, though,  
7 when the tape is sold the purchasers of the tape  
8 will slap it in the machine and not be com-  
9 municated to.

10 COMMISSIONER HERSEY: When I say  
11 I suppose it is, I am not enough of a lawyer  
12 to deal with this, Arthur.

13 COMMISSIONER MILLER: John, none  
14 of us are enough of a lawyer to deal with  
15 this. This is one hell of a problem.

16 COMMISSIONER HERSEY: Let us take  
17 not your tape but the printed circuit in the  
18 emission control of an automobile.

19 There, you see, I can see the  
20 possibility that somebody, as one of our  
21 witnesses said, has been happening to some  
22 extent in Japan, might peel the layers of  
23 the chip down, take photographs of it, and so on.  
24 There I believe that what is happening is  
25 exactly analogous as to what might happen if

1  
2 somebody took a casting of a mechanical  
3 part and sold that.

4 Do you see what I am saying?

5 COMMISSIONER MILLER: I see what  
6 you are saying.

7 COMMISSIONER HERSEY: It is  
8 simply protected by patents in that case and  
9 in this case would presumably be protected by  
10 contract law, by one of the other modes which  
11 is now available for protection.

12 I think this protection is being  
13 used now and is adequate for this sort of  
14 misappropriation.

15 COMMISSIONER MILLER: But we are  
16 trying -- I think we are both trying -- to  
17 avoid any possibility that the copyright  
18 rule brick be used to protect in the patent  
19 mode. I think we are all trying to do that,  
20 and the problem we are having is in defining  
21 the utilization of a computer program so as to  
22 include those that could be protected by copy-  
23 right and exclude those that would really  
24 perform a patent function.

25 The problem is we are breaking

1  
65 2 down. The difficulty I am having  
3 with your mature program notion is that there  
4 are many functions you can put a mature program  
5 to. That, under your definition of copyright,  
6 constitutes the infringing act, namely,  
7 transmitting information to a human being.

8 So it cannot simply be that the  
9 mature -- the existence of the mature --  
10 program ends it. We have got to define this  
11 thing somewhat differently.

12 COMMISSIONER HERSEY: Okay. This I  
13 regard as an enormous concession from you,  
14 Arthur, because it seems to me that I hear  
15 you saying that there is a problem here.

16 COMMISSIONER MILLER: We are both  
17 happy, John, but I think you made the  
18 enormous concession about fifteen minutes  
19 ago.

20 COMMISSIONER HERSEY: Small one. But  
21 you see, what I think I have to say is that  
22 there is doubt, and there is substantial doubt,  
23 and I believe that the history of copyright  
24 in this association with books, plays, film,  
25 television, music does stand in some jeopardy

1  
2 in this context because the very large number  
3 of programs increasingly now -- the very large  
4 number of programs that are being devoted to  
5 industrial and mechanical ends -- creates,  
6 I think, the real problem. The whole  
7 mechanics, the automotive -- you know, all the  
8 microprocessor uses of the computer program  
9 now seem to me to enlarge this problem in a  
10 significant way and one which, if opened to  
11 copyright, will lead to serious troubles.

12 COMMISSIONER MILLER: At no point  
13 does the Subcommittee report suggest that the  
14 utilization of a copyright on a program would  
15 in any way inhibit any other person from  
16 fabricating in his, her, or its own program  
17 to perform exactly the same function, whether  
18 it is emission control in a car or running  
19 a steel mill.

20 What we are really talking about  
21 are those uses just anterior to the absolute  
22 running of the steel mill and whether they  
23 should be embraced within the copyright or not.

24 COMMISSIONER HERSEY: I confess,  
25 I am in no wise able to say where that cut-off



1  
2 point should come. I think that a real  
3 expert opinion has to be consulted, and when  
4 Licklider said "I think you need more thought  
5 on this," I believed him.

6 COMMISSIONER MILLER: Let me pose  
7 one last question.

8 I do not want an answer, I just  
9 want to indicate why I find it so incredibly  
10 troublesome.

11 Let us go back to that program  
12 we have been playing with. We have been talk-  
13 ing about a mature program on a piece of tape.  
14 Let us plug that program into the machine  
15 itself so that it is in the machine in the  
16 electronic sense.

17 In your sense that would be a matured  
18 square. It is now in an operational mode,  
19 it is working its little electronics off.

20 Assume the technological  
21 capability. Somebody taps that computer and  
22 by whatever technique one does that, bleeds  
23 off a copy of that program as it is actually  
24 operated. Branch the hypothetical. He  
25 pulls off his own electronic version of that

1  
2 program stolen from the program's  
3 electronic version, reduces it to tape,  
4 puts it on the screen, and prints copies of it.  
5 The other branch is he bleeds that program off,  
6 sends it directly into the central processing  
7 unit of his own computer where it does work.

8 Are either of these infringing  
9 acts?

10 COMMISSIONER HERSEY: There is  
11 a problem. There is a problem. What I think  
12 can be argued is that other modes of law will  
13 give the proprietor plenty of protection in  
14 either of those circumstances. I do not know  
15 what, whether they be breaking, entering, what  
16 the mode would be, but there are other modes of  
17 law.

18 COMMISSIONER PERLE: Existing law,  
19 John?

20 COMMISSIONER HERSEY: Yes, I think.

21 COMMISSIONER MILLER: But John,  
22 in the first of the two branches he was doing  
23 exactly what we were talking about ten minutes  
24 ago. He is selling copies in a nonmature form,  
25 under your definition of the program.

1  
2 COMMISSIONER HERSEY: There is a  
3 problem there and I think it needs expert  
4 advice which we have not had.

5 COMMISSIONER MILLER: But the  
6 best experts in the world tell us to go find  
7 other experts.

8 COMMISSIONER HERSEY: True. There  
9 are some interested experts and there are some  
10 disinterested experts. Let us look for the  
11 interested ones.

12 COMMISSIONER MILLER: J.C.R.  
13 Licklider?

14 COMMISSIONER HERSEY: I am interested  
15 in him for obvious reasons but I think there are  
16 degrees of interest here.

17 COMMISSIONER MILLER: As a member of  
18 the Subcommittee, I would still like another  
19 crack at writing the report.

20 COMMISSIONER PERLE: The adaptation  
21 part?

22 COMMISSIONER MILLER: Not only  
23 that. It may require another draft.

24 COMMISSIONER PERLE: I think the  
25 whole report needs attention. There is one

1  
2 thing, and maybe almost redundant at this  
3 point, that I would like to know, John.

4 If, as I understand what you said,  
5 copyright protection is an appropriate way of  
6 protecting computer programs up to the point  
7 of maturity -- is that correct?

8 COMMISSIONER HERSEY: Yes. With  
9 maturity to be defined.

10 COMMISSIONER PERLE: (Continuing) --  
11 what is the social evil or other evil --  
12 what creates the mark of Cain? What is the  
13 curse that occurs as the thing actually starts  
14 to be used?

15 COMMISSIONER HERSEY: It is then a  
16 mechanical device and copyright does not  
17 protect mechanical devices.

18 COMMISSIONER PERLE: Does copy-  
19 right protect a phonograph record?

20 COMMISSIONER HERSEY: Only in the  
21 sense that it -- yes, it does, but it protects  
22 it because the phonograph record communicates  
23 the mode of expression of the author to the  
24 listener. The program does not communicate the  
25 mode of expression of the author to anyone or

1  
2 anything. It has become a mechanical device.  
3 That is the essential difference and that is  
4 why copyright is not incorporated.

5 COMMISSIONER PERLE: Except that,  
6 strangely enough, copyright does protect the  
7 mechanical devices itself in the case of  
8 the piano roll, in the case of tape. It  
9 does not protect the performance of that. It  
10 protects the copying of it.

11 COMMISSIONER HERSEY: I understand  
12 that, yes.

13 COMMISSIONER PERLE: That is all  
14 we are saying here in the Subcommittee.

15 COMMISSIONER HERSEY: I am saying  
16 there is a substantial difference between  
17 these two devices.

18 COMMISSIONER PERLE: I think that  
19 if you have gone this far -- and I think it is  
20 a tremendous step forward, from my perception  
21 of your viewpoint -- a tremendous step forward  
22 to say that copyright is appropriate for  
23 programs up to that point where --

24 COMMISSIONER HERSEY: I have said  
25 that all along.

1  
72 2 COMMISSIONER PERLE: It may be  
3 a part of a machine -- a functioning part  
4 of a machine.

5 COMMISSIONER KARPATKIN: I would  
6 have some problem voting for the report in its  
7 present form for two reasons relating to  
8 policy of concern.

9 I think especially to the public  
10 numbers of the Commission. Neither of these  
11 two matters is adequately or even at all touched  
12 upon in the report.

13 The first is the question of  
14 monopoly power in industrial concentration.  
15 I think that, regardless of questions of  
16 efficiency and logic with respect to whether  
17 software should be covered, there are  
18 questions of the consequences if it is  
19 covered. Those questions were raised  
20 in the PIE-C report that was made to the  
21 Commission. They were raised rather carefully  
22 and the report indicates that further study  
23 was necessary.

24 The Software Subcommittee Report  
25 did not list the need to avoid industrial

1  
2 concentration, the growing of monopoly power  
3 as one of its criteria and made only one  
4 casual reference without discussion or  
5 really formulation or facts to this problem.

6 John touches on it in his report  
7 and I think raises the issue very sharply,  
8 and I think that the Software Subcommittee and/or  
9 the Commission have to take a look at this  
10 issue.

11 Even if it were true that it is  
12 more efficient or more beneficial, in some  
13 other senses, to come to the conclusion that  
14 the Software Committee comes to, it has to  
15 demonstrate, as well, that either there is no  
16 problem about growing monopoly power or that  
17 the greater efficiencies outweigh the benefits  
18 of averting greater industrial concentration.

19 I think it is important because  
20 it is the acknowledged public policy of this  
21 country to avoid monopoly before it develops  
22 and to attempt to break it up after it  
23 develops.

24 CHAIRMAN FULD: Are you finished?

25 COMMISSIONER KARPATKIN: That is

74 1  
2 point one.

3 Point two is that John has  
4 consistently, orally and in his reports,  
5 dealt with the consequences to our culture  
6 or, to use a vogue word for this year, the  
7 quality of our life if we were to take this  
8 step of making computer programs copyrightable.

9 In his final report he says it is  
10 the heart of the matter but in the Subcommittee  
11 Report it is not even discussed.

12 There again, I think that is a  
13 matter of public interest and public policy  
14 so vital that for the Commission not to deal  
15 with it directly and not to weigh it is not  
16 only a mistake but may even be a scandal.

17 I think it is fair to juxtapose  
18 when one considers policy and values those which  
19 are cultural and quantifiable in the  
20 traditional sense against those which are  
21 economic and quantifiable and to take a position.

22 The Commission has not done that  
23 in the Subcommittee Report and I think it does  
24 have to.

25 COMMISSIONER LACY: Mr. Chairman,



1  
2 because I have seconded the motion to adopt  
3 the Subcommittee's Report or at least to  
4 do so in substance, because of Mr. Hersey's  
5 proposed offer as an amendment to the report,  
6 I would vote against it.

7 I would like to have the  
8 opportunity to explain in some detail why I  
9 do so because of my great respect for the  
10 care and thoroughness and quality of Mr.  
11 Hersey's dissenting report.

12 I, in the first place, think we  
13 should not, as Ms. Karpatkin says, refer to  
14 the Commission's making a step as though it  
15 were an important and major one to recommend  
16 that computer programs receive copyright  
17 protection.

18 I think that it would be the view  
19 of the Copyright Office and rather clear intent  
20 of the Copyright Law that computer programs  
21 indeed now are under copyright protection  
22 since January 1st certainly, as soon as they  
23 are fixed in any tangible form indeed.

24 This seems so clear.

25 You may remember that the

1  
76 2 Register of Copyrights raised very serious  
3 questions as to whether this Commission  
4 even had any mandate to explore that question  
5 as one on which further recommendation was  
6 necessary. Indeed, if Mr. Hersey's views were  
7 adopted, what we would be doing would be  
8 recommending that the law be substantially  
9 amended to exclude this class of writings from  
10 the protection of Copyright Law.

11 That definition would be quite  
12 different which would not enjoy the benefit  
13 of the Copyright Law. We are not proposing to  
14 add a new protection. We are considering  
15 whether or not it should be withdrawn.

16 Now, as I understand Mr. Hersey's  
17 views, there are basically four points that  
18 would be made and he will, of course, be  
19 free to amend my summary and I apologize for  
20 doing it but it is necessary for me to do it  
21 in order to respond.

22 One was that computer programs  
23 were radically different in kind, not merely  
24 degree but in kind, purpose, character from the  
25 other writings to which the -- or to the

1  
2 writings to which the -- Constitution  
3 amended in the Copyright Law applied. This  
4 difference was so complete and so great that  
5 it ought to receive a completely different  
6 treatment.

7 A second point offered was that  
8 there was no apparent necessity for copyright  
9 protection because that was evidenced by the  
10 fact that very few of the hundreds of thousands  
11 of computer programs that have been created  
12 prior to the going into effect of the 1976  
13 Act had been registered as computer programs  
14 for protection with the Library of Congress  
15 which suggested that the great majority of  
16 programmers saw no need for copyright  
17 protection and, indeed, that the testimony  
18 before this Commission was relatively luke-  
19 warm on that point.

20 The third point was that to the  
21 degree protection was necessary, it was  
22 available under trade secrecy laws and  
23 under fair competition laws and under mis-  
24 appropriation laws and under, perhaps, other  
25 modes of protection.

1  
2 So there different protection is not needed.  
3 There is a third feeling that copyright  
4 protection might even be harmful to the  
5 proprietors or creators of computer programs  
6 and that the preemption provisions of the new  
7 law would raise the threat that they would  
8 lose, by being copyrighted, more effective modes  
9 of protection through trade secrecy, and that  
10 hence copyright would be deleterious to  
11 proprietary matters.

12 Finally, there was the point which  
13 I take it was the fundamental motivating  
14 force that has led to the exploration of these  
15 other three reasons given, namely, that the  
16 mechanical character, the nonhuman character  
17 attributed to copyright programs was so  
18 different that to put them under the same  
19 regimen with humanistic and creative works  
20 like poetry, or grammar, or fiction, would  
21 corrupt the concept of a distinction between --  
22 would blur our concept of the discontinuation --  
23 between human and mechanical thought and would,  
24 in some not quite clear way, result in a  
25 deterioration of the quality of life.

1  
79 2 I would like to take those four  
3 in order.

4 There are, of course, many kinds  
5 of writings, rather unquestionably, instructions  
6 other than computer programs.

7 A musical score is, of course, not  
8 an author's envisioned music that he hears in  
9 his mind and that he hopes others will hear.  
10 The score is an instruction to depress certain  
11 keys that may be on the piano with certain  
12 force and in certain sequence and in certain  
13 combinations in order to produce the intended  
14 result.

15 There is a communication to a human  
16 to do that. The same score, of course, can be  
17 made a communication to a machine. I am not  
18 referring here to phonograph records which  
19 record the human's following of the in-  
20 structions. I am referring to adapting the  
21 score so that it activates directly a musical  
22 instrument -- an electronic musical in-  
23 strument -- to produce a particular sound.  
24 No human intervention at all but an outright  
25 mechanical achievement as a result.

1  
2 I think no one would assume that  
3 that is changing the author's composition.

4 Indeed, this kind of program can  
5 indeed be hardwired as into a music box so that  
6 you do not have a record or tape or anything;  
7 you have a pure mechanical device, and upon  
8 lifting the lid of the music box play the  
9 original intended composition.

10 I do not think this question of  
11 mechanical form or communication to a machine  
12 is really the issue.

13 I take it that what really under-  
14 lies this in Mr. Hersey's objection is all of  
15 the things I have been talking about up to now.  
16 He would say yes, they may be mechanical, they  
17 may instruct a machine, not a human, but  
18 the result of that is the recreation of the  
19 author's original work. It is a unilateral  
20 one or one instruction. It does not instruct  
21 the machine to do anything but reproduce the  
22 author's original work. It is in the  
23 nature of computer programs that they are  
24 contingent programs. They do not say do this,  
25 that, and the other, they say if "A", then do

1  
81 2 "B". Then if "C", do "E", but if "F", do  
3 "G", instead of "E". That is, it instructs  
4 the machine to behave in a variety of different  
5 ways.

6 For example -- and I am sorry this  
7 is being so tedious, but I think it really is  
8 a point. One could write a protocol for the  
9 conducting of a physical examination of a  
10 patient in an office. Indeed, such exists  
11 when there is a written instruction to the  
12 physician's assistant or the nurse to take  
13 the specific steps involved in taking the  
14 blood pressure, the pulse, and temperature  
15 and so on.

16 Increasingly, these can be put  
17 in the form of a computer program so that the  
18 patient is mechanically subject to these  
19 diagnostic steps. The computer program can be  
20 more sophisticated than that. It can say  
21 if the blood pressure is higher than 160/100,  
22 then proceed to do this set of steps which you  
23 do not do if it would not be. You have a  
24 branching technique. It becomes typical  
25 of a computer program.

1  
82 2 One can have a musical program  
3 that instructs the musical instrument to harmon-  
4 ize the original creation in a variety of  
5 ways. So that I fail to see that there is  
6 quite the radical difference between computer  
7 program either in terms of the fact that it  
8 addresses a machine or that it is capable of  
9 being hardware in a mechanical form or that  
10 it instructs the machine to produce unpredictable  
11 results rather than merely to produce a result  
12 that was already intended.

13 As to the -- and I am going to  
14 come back to this whole point a bit later --  
15 as to the second point that the industry  
16 and particular independent computer programmers  
17 had shown little interest in copyright, I have  
18 to think you have to remember that prior to  
19 the first of January copyright could be obtained  
20 under a computer program only by publishing  
21 that program and offering it for sale to anybody  
22 that wanted it.

23 If one did not choose to market a  
24 program in that way, he could not, in effect,  
25 register it and gain a copyright in it.



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Hence, only those firms -- and this is the reason why larger firms primarily did it -- who were producing programs for wide-spread use by many consumers, would take that step.

A small scale consumer program <sup>who</sup> producer<sub>by</sub> and large produced under contract and on order a custom-made program for particular customers, did not want to publish it.

The copyright was irrelevant to him.

Now, under the new rule, you have changes both in the Copyright Law and in the nature of the computer industry.

In Copyright Law now, unless we take some steps to persuade Congress to amend the law, the computer program comes under copyright protection. It is not necessary for the publisher to abandon its secrecy, to make it available to everybody, for it to exist under the copyright regime.

The disadvantage of copyright under the 199 Act largely, so far as the

1  
84 2 proprietor is concerned, is removed. The  
3 other point is that we are in a moment of  
4 revolution and a number of programs will  
5 be offered for sale to purchasers at a very  
6 low price in retail shops that are already  
7 here.

8 We no longer are in a situation  
9 where only a small minority of programs are  
10 widely offered. So that, I think, to say that  
11 for most producers copyright under the 1909  
12 law and under the early stage of production  
13 was an irrelevant mode of protection is not at  
14 all to say that this would be true as the in-  
15 dustry changes and the law is being changed.

16 On the point that other modes of  
17 protection are available, true they are,  
18 but they all require that the creator of the  
19 program deny the public access to it.

20 You will protect his right only by confining  
21 the people who can use his work which is the  
22 direct opposite of the public policy from the  
23 consumer point of view that we would all see--  
24 to give him every encouragement to make it  
25 as widely available as possible.

1  
2 So that the existing modes of  
3 protection are all here, one might say, anti-  
4 social, which is the reason for the desirability  
5 of substituting the mode of protection. It  
6 does encourage the widespread publication, the  
7 free availability of work to any purchaser  
8 without imposing on him restrictions of  
9 secrecy or like.

10 Turning to the question of whether  
11 a copyright may be deleterious to the  
12 proprietor: I think that under the old law  
13 it is true that publishing the work to get  
14 statutory copyright did destroy the possibility  
15 of protection as trade secrecy. Any ambiguity  
16 or confusion on that point resulted in Section  
17 301, I think, is manifestly not true. It  
18 simply cannot be the case that the obtaining of  
19 copyright by the simple fact of factious, a  
20 sequence of works, or concepts on paper destroys  
21 trade secrecy protections.

22 Obviously, nonsense. This  
23 would mean that one had no right to keep  
24 secret any internal confidential memorandum of  
25 a corporation or the government, all of which

1  
2 is now copyrighted. When you write a memo --  
3 internal in one's office -- now it is copy-  
4 righted, and when one writes down a secret  
5 formula for making Coca-Cola, it is copy-  
6 righted because it is written down.

7 Finally, to the whole fundamental  
8 case, I think there may be some misconceptions  
9 of perhaps the mystery of history of copyright.

10 Copyright was argued for and won  
11 in this contry, mainly, by a fairly hard-nosed  
12 businessman who wanted protection for things  
13 like the Blue-Black Speller, for the  
14 dictionary, for almanacs, for navigation tables,  
15 for maps. The thought that it would have any  
16 great relevance for fiction -- fiction hardly  
17 existed as a commercial viable art form in the  
18 early days of copyright. That it would be  
19 imported to poets, I think, is a considerably  
20 later conception.

21 What really happened, basically,  
22 was that as the creation of literature or of  
23 music became commercially important, as it  
24 became important for us to generate some  
25 substantial income for authors, they were able

1  
87 2 to carry it on in the matrix of the kind of  
3 protection essentially established for the  
4 protection of essentially utilitarian rather  
5 than artistic works.

6 I make no slightest doubt in my own  
7 mind that if Alexander Hamilton had known about  
8 computer programs when he was sitting as a  
9 member of the Constitutional Convention or  
10 writing the Federalist papers, this would have  
11 been a class of writings contributing to the  
12 advancement of science and the useful art,  
13 that he would have been delighted to cede  
14 statutory recognition. This would have been  
15 the art of the kind of thing he would have  
16 conceived statutory protection should  
17 have been extended to.

18 I simply fail to see -- I under-  
19 stand the deep emotional feeling that underlies  
20 a conviction that somehow a humanistic thought  
21 should be separated from mechanical kinds of  
22 things, but it seems to me no more persuasive  
23 than to say that the same coastal system  
24 carries the same preferential rate, the  
25 recordings of the Sex Pistols and the poetry

1  
2 of Robert Lowell, means of corruption of  
3 our society in confusion between those.

4 The Copyright Law has extended  
5 its broad and open invitation to have protected  
6 anything that people have created with their  
7 minds, without establishing the restrictive  
8 tests of patents, and without giving the  
9 monopolistic protection of patents would  
10 have opened to any kind of creative, not  
11 only humble, however, utilitarian in his  
12 creating or how great the right to benefit  
13 whatever value society attaches to it by being  
14 willing to pay for it.

15 I understand the emotion behind  
16 it, I simply fail to see its relevance to  
17 Copyright Law.

18 COMMISSIONER DIX: Mr. Chairman,  
19 I would like to be very brief. Like the rest  
20 of us, I have been troubled by this whole issue  
21 since, I think, John Hersey called it first  
22 to our attention.

23 I have been increasingly  
24 affected by his doubts as we have seen  
25 successive drafts of his statement, and I think

1  
2 I have reached the point simply that I am  
3 willing to say I would like to associate  
4 myself with his latest dissent. Lest perhaps  
5 with no offence, John, I hope from the  
6 theological aspects of it as the social and  
7 economic factors to which Ms. Karpatkin  
8 addressed herself a few minutes ago. So I  
9 think I would leave it at that at the moment.

10 I am not talking, by the way, about  
11 the adaptation issue which I simply had not  
12 thought about until this morning.

13 VICE CHAIRMAN NIMMER: I just  
14 want to say that I am still reserving judgment.  
15 I have some agreement with Mr. Hersey's position  
16 but not total agreement. I am still of the  
17 view that there may be some mid-position such  
18 as I suggested in prior meetings and will not  
19 go into again here. So I am reserving  
20 judgment as to what my ultimate position will be.

21 COMMISSIONER LACY: Mr. Chairman,  
22 I would like to have one more word now.  
23 I do not think the monopolistic problems escape  
24 attention. Even though they may not have  
25 been, if so, they certainly should be

1  
2 addressed in the language of the report.

3 I think quite clearly the case is  
4 that the people most in need of protection and  
5 encouragement are the independent small-scale  
6 businesses in the copyright field, and the  
7 copyright is an essential necessity for  
8 programs to avoid the accumulation of  
9 monopolistic power in those large corporations  
10 which control hardware and whose enormous  
11 financial resources make them independent of  
12 any great need for protection to continue  
13 their success.

14 I have accepted this position.

15 COMMISSIONER HERSEY: That statement  
16 does not accord with the degree of interest  
17 in our proceedings by --

18 COMMISSIONER LACY: Quite so  
19 because only the large corporations have, up  
20 until now, been producing for a broad  
21 market. I think that is the only thing there.

22 COMMISSIONER WILCOX: I also  
23 have increasing doubts and would like to,  
24 if it is in order, to suggest that we take Mr.  
25 Miller's suggestion that some rewriting



1  
91 2 be done before it is approved.

3 COMMISSIONER KARPATKIN: I would  
4 like to hear Mel's middle ground again,  
5 either orally here or in writing in some way,  
6 if he has not already put it in writing.

7 VICE CHAIRMAN NIMMER: Well, it is  
8 essentially that point that John distinguishes  
9 phonograph records from other sorts of works  
10 because those do communicate ultimately  
11 what we more conventionally think of as the  
12 writings of an author.

13 It seems to me that it is possible  
14 one could say that computer programs even though  
15 they, themselves, speak to machines, they  
16 ultimately, if the particular program is resolved  
17 in conveying what otherwise would be regarded  
18 as writings of the authors, then the programs  
19 themselves should be protectable. But if the  
20 program merely tells an engine how rich an  
21 oil mixture should go into the engine, then that  
22 kind of computer program perhaps should not be  
23 protected.

24 MR. APPLEBAUM: Very brief and  
25 objective recap of the program.

1  
2 IBM teaches a course in programming  
3 productivity, and one of my senior people was  
4 out there in November and submitted a report  
5 with a few highlights. This is what IBM is  
6 teaching:

7 The average life of a program is  
8 around eighteen months. Almost thirty percent  
9 of programs die in two months or less. If you  
10 eliminate that thirty percent, the average  
11 life of the average program is only thirty-  
12 three months. The life-span of programs decays,  
13 expeditiously, similar to the half-life of a  
14 radio active substance.

15 Maintenance programming runs  
16 from fifty percent to one hundred percent  
17 in typical installations. The average is  
18 around seventy percent. A significant number  
19 around ten percent of the large system of  
20 installations are in one hundred percent  
21 maintenance mode. No new applications what-  
22 soever. This may put this in a time frame  
23 and perhaps more significantly stress what  
24 it is we are talking about. Perhaps it is  
25 helpful.

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2 COMMISSIONER LACY: It does mean  
3 that the average valid life of a program is much  
4 longer than that of the average valid life of  
5 other works computed under the Copyright Law.  
6 Most books, advertising labels, photographs,  
7 unpublished music, and so on, and magazines,  
8 and so on, have a life of days or weeks.  
9 It does not suggest that they are very short.

10 COMMISSIONER MILLER: To return to  
11 Rhoda's two points. Although they were both  
12 taken up in the context of the Software Sub-  
13 committee Report, in my own conception of  
14 things and indeed one of the reasons why  
15 I asked our Executive Director his game plan  
16 for our final report -- my own conception of  
17 things, the two questions that Rhoda asked  
18 are questions that should be directed to  
19 each and every aspect of our work.

20 There is nothing particularly  
21 unique as with regards to the question what  
22 is the impact of our cultural life of software.  
23 The same question may properly be addressed  
24 to Data Base protection and New Work protection  
25 and Photocopying protection. If we are to look at the

1  
2 monopolization impacts of recognizing  
3 copyright with regard to software, we should  
4 also look to the monopolization impact of  
5 recognizing copyright and Data Base, New  
6 Works and whatever calibration of fair use or  
7 no calibration of fair use we engage in with  
8 regard to photocopying.

9 I view both issues as generic  
10 and, in a sense, cross-cultural and proper  
11 subjects for what I referred to earlier as the  
12 background portions of the report to be  
13 played out in their more precise applications  
14 in terms of each of what may be four different  
15 subcommittee contexts.

16 I personally would just like to  
17 note that in addition to the points Dan made  
18 with regard to the purpose of copyright and  
19 whether its purpose was cultural development  
20 protection, the notion of some sort of a  
21 qualitative slander with regards to software  
22 versus literature, which, as I just said,  
23 should also be asked with regard to Data  
24 Base versus literature or new computer-  
25 generated works versus Bach or Handel or Haydn.

1  
2 My personal view on that issue is not simply  
3 is the horse out of the barn and long since  
4 down the road as two hundred years of  
5 American legal history on these issues would  
6 indicate, but you damn well better be certain  
7 that you are serious about judges making  
8 cultural decisions in the guise of copyright  
9 questions and whether that is in the cultural  
10 interest of the society, as well as whether  
11 it is consistent with a variety of First  
12 Amendment aspects that converge on copyright,  
13 All of which is sort of an abstract way of  
14 saying you just cannot do it on a qualitative  
15 cultural social value test or intellectual  
16 and artistic property. You just -- I do not  
17 think you can do it and you have got to take a  
18 lot of garbage.

19 We have always taken a lot of  
20 garbage to make sure that we breathe some  
21 economic life into the few morsels of  
22 quality produced by our elite class.

23 CHAIRMAN FULD: Most of what I  
24 would have said has already been said. I have  
25 done a lot of mental wrestling with the

1  
2 problem. I, as a member of the Subcommittee,  
3 had some doubts and reservations, but I have  
4 concluded and I am now at rest with the report.

5 I think that important in the  
6 determinations as to whether the program  
7 should be copyrightable is the dissemination that  
8 will flow from that as opposed to the secrecy  
9 that will attach to other methods of enforce-  
10 ment or protection.

11 As to the damage that computers  
12 will do to our culture or, if you will, human-  
13 izing of literary artistic efforts, I think  
14 that will follow from the use of computers  
15 in any event, regardless of whether the  
16 program is copyrightable or not. So that I,  
17 at the moment, certainly wholeheartedly  
18 agree with what was written.

19 However, there are these other  
20 matters to be taken up and I think reflected  
21 in the report that we wrote. In view of  
22 that, Gabe, shouldn't we withdraw the motion  
23 at this time and wait on a redo of the  
24 report dealing with the word "adaptation"  
25 and to take account of Ms. Karpatkin's view

1  
2 as to public policy?

3 COMMISSIONER PERLE: If Dan will  
4 withdraw his second, I will certainly withdraw  
5 my motion.

6 COMMISSIONER LACY: Withdrawn.

7 CHAIRMAN FULD: You will have this  
8 rewritten and circulated and take it  
9 up at the next meeting.

10 COMMISSIONER KARPATKIN: Mr.  
11 Chairman, I would especially urge that the  
12 material in the Public Interest Economics  
13 Report dealing with the problem of monopolization  
14 be specifically taken up by the staff.

15 COMMISSIONER PERLE: Within the  
16 context of one report or all the reports?

17 COMMISSIONER KARPATKIN: Well,  
18 they raise it with respect to the software  
19 issue, particularly, and not, as far as I  
20 can recall, with respect to the others.

21 COMMISSIONER HERSEY: My only  
22 question would be is how long is this waltz  
23 going to go on?

24 CHAIRMAN FULD: It will end  
25 by July.

1  
2 COMMISSIONER KARPATKIN: Are you  
3 contemplating another draft?

4 CHAIRMAN FULD: I think it will  
5 not require too much of a change if adaptation  
6 can be of some other mode of expression and  
7 some reference to what we had considered in  
8 the course of our deliberation of the  
9 Subcommittee.

10 Some articulation as to the  
11 monopolistic charge.

12 Is there anything else that we  
13 want to take up now?

14 MR. LEVINE: I did want to take  
15 up our next meeting.

16 Up to the last ten minutes of  
17 the discussion or so I was considering  
18 suggesting that we not hold the March meeting  
19 as I envisioned the way things might proceed  
20 at the April meeting.

21 As a result of comments we  
22 received from the persons interested in the  
23 Photocopy Committee Report, we would have  
24 testimony on that.

25 Yes, I am still of the opinion that



1  
2 perhaps there would be time at the  
3 April meeting also to take up the redraft of  
4 the Software Committee Report and any material  
5 prepared along with it, and so I guess I  
6 still am of the opinion that perhaps, unless  
7 someone feels differently, that we not have  
8 a March meeting.

9 CHAIRMAN FULD: It was set for  
10 March 16th and 17th.

11 COMMISSIONER PERLE: When is the  
12 April meeting?

13 MR. LEVINE: The April meeting is  
14 April 20th and 21st and that would be in  
15 Washington.

16 CHAIRMAN FULD: Does anyone have  
17 a different view as to the necessity of a  
18 March meeting?

19 COMMISSIONER MILLER: I think  
20 before we all feel totally calendar liberated  
21 with regard to the two days for the March  
22 meeting, I think we should each take a blood  
23 oath to make ourselves available for  
24 subcommittee meetings on those days.

25 CHAIRMAN FULD: Speaking for

00  
1  
2 myself, that is agreeable.

3 If there is nothing more to be  
4 said, we will recess and adjourn until  
5 April 20th.

6 (Whereupon, the within meeting  
7 of Commissioners was recessed until April  
8 20th, 1978.)

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